



WEBTEC

WEBSTER INSTRUMENTS
(A DIVISION OF WEBTEC PRODUCTS)

**Hydraulic Test
Equipment, Sensors and
Components for the
Mobile, Industrial
and Agricultural
Industries**



www.webster-inst.com

Short Form Catalogue

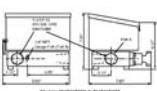


Webster Instruments

A commitment to quality, skilled craftsmen, CNC machine technology and our production divisions' accreditation to ISO9001 : 2000 assure the highest quality standards. Careful attention to design and detail ensures a technically advanced and high quality product individually checked on test stands traceable to NIST (NSB) or equivalent international standards. Where applicable products have been approved to bear the CE mark.

Quality Hydraulic Test Equipment from the Webster Range

Short Form Catalogue

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The Source for Quality Hydraulic Test Equipment

Look to Webster Instruments for

Experience

Over 30 years of product development enhanced by constant technical innovation to meet the ever changing needs of fluid power users.

Support

Located in Milwaukee, Wisconsin, with distributors across North America, we provide product engineering and support before, during and after the sale. We aim for same day shipment on stock items. Other locations include England, France and Germany for world wide support.

Quality

Dedication to quality starts with design and is carried through all stages of manufacture. This commitment and ability to meet demanding criterion is demonstrated by our manufacturing divisions' accreditation to ISO9001 : 2000.

A Complete Line

Over 350 different portable hydraulic testers, flowmeters, pressure transducers, temperature sensors, speed sensors, hydraulic data acquisition systems and digital display units all designed to be easy to use, accurate and durable. For trouble shooting & testing of components or commissioning hydraulic circuits on mobile equipment, industrial machinery, hydraulic test stands or in the laboratory, Webster Instruments helps you perform your job quickly, efficiently and professionally.

General Information

Customer Satisfaction

We strive to provide the highest level of customer service possible while manufacturing the most progressive and the highest quality line of hydraulic test equipment available on the market today. If for any reason you are not satisfied with the performance of the item purchased or the level of service you receive, please call and let us know. **A satisfied customer is the best and most honest form of advertising we know.**

How to get Technical Information

Call, fax, email or mail us. Call toll free in the US or Canada, **800-WEBTEST (800-932-8378)**, telephone; **(414) 769-6400**, fax: Toll Free: **866-FLOWMETER (866-356-9637)** or **414-769-6591**. Your contacts are Kevin, Ann, Paul or Mike. Our email address is **sales@webster-inst.com**. Our website address is **www.webster-inst.com**.

How to Open an Account

NET 30 day accounts can be opened with approved credit. To apply send bank reference, two trade references and your federal tax ID number. Credit card orders or COD shipments can be made for other accounts, as well as overdue accounts.

How to get Delivery Information

Call, fax, email or mail us. Our toll free phone number is **800-WEBTEST (800-932-8378)** or **414-769-6400**, Our fax number is: Toll Free: **866-FLOWMETER (866-356-9637)** or **414-769-6591** and our email is **sales@webster-inst.com**. Your contacts are Ann, Kevin, Paul or Mike. We aim to ship same day via UPS standard service on orders placed before 1:00 pm - our UPS driver collects around 3:00 pm and we like to have a couple of hours to process paperwork and package the goods. However if you need something shipped same day by next day air or second day air the major carriers will pickup until 7:00 pm - we will do our best to process your order, even if you call after 1:00 pm. We can also ship Federal Express, Emery, Burlington or TNT. Prices shown in this list are FOB Milwaukee, unpacked.

How to Order

To order, call, fax, email or mail us. Our toll free phone number is **800-WEBTEST (800-932-8378)** or **414-769-6400**, Our fax number is: Toll Free: **866-FLOWMETER (866-356-9637)** or **414-769-6591** and our email is **sales@webster-inst.com**. The order desk is manned from 8:00 am to 5:00 pm Central Time, Monday through Friday - ask for the order desk. Outside these hours there is an answer machine on line, leave a message with your name and number and we will get back to you. The fax machine has its own line and is always open.

Stocking Policy

We hold stock of popular items in Milwaukee.

How to get Literature

Call us, fax us, or mail us. Your contacts are Ann, or Sue.

How to Process Repairs

We like to think our equipment never goes wrong but if it does we will do our best for you. Call for an RGA# before returning your repair, your contacts are Kevin or Paul. A written estimate will be provided before we proceed. Occasionally we get units back with no paperwork at all - no address, no phone, no name. Please be sure to get your RGA # before returning any unit as we can not provide the high level of service you deserve without this important information.

Shortages / Damaged in Transit / Returned Goods

Shortages must be reported within 10 days of shipment. Goods damaged in shipment are the responsibility of the carrier and all claims must be submitted to the carrier.

Returned goods not proven to be defective due to materials or workmanship will be subject to a minimum 25% restocking fee.

Mastercard, Visa, and American Express are all accepted.



DHT Series Portable Hydraulic Testers

Hydraulic Testers

Standard Features:

- High Contrast LCD Digital readout
- Bi-directional Loading Valve with "INTERPASS"™ Burst Disc Protection
- Bi-directional flow & pressure readings
- Flow accuracy 1% of reading
- US & Metric units, button select
- Portable (DHT402 only 18 lbs)
- 50 - 250 °F Temp. Range
- rpm input circuitry



- Low battery indication
- Remote flow & temperature input is easily field calibrated for any LT series flowmeter
- CMOS low-power circuitry
- "Auto-Off" extends battery life
- 6,000 psi Pressure Gauge
- 8,000 psi Gauge on DHT502-HP

CE Approved

Available with SAE or BSP ports

Model Number	Flow range gpm Accuracy ±1% of Reading	Inlet/Outlet Ports	Max. Pressure psi	Factory Calibrated Remote Flow Input	Weight	Dimensions W x D x H inches	Temperature Range Internal	rpm Range & Remote		
DHT252S	2 - 60	1-5/16"-12 #16-SAE ORB	6000	DHT series testers EXternal input is easily calibrated in the field to any Webster LT series flowmeter	18 lbs	9.5" x 8.5" x 7"	50 - 250 °F 0 - 120 °C Dual Scale	0 - 9999		
DHT402S	3 - 100				23 lbs	10" x 8.5" x 8"				
DHT502-HP	4 - 120				22 lbs					
DHT752F	6 - 150				23 lbs					
DHT762F	7 - 200				23 lbs					
DHT802-HP	7 - 200				23 lbs					
DHT401S	2 - 100	1-5/16"-12 #16 SAE ORB	6000	N/A	18 lbs	9.5" x 8.5" x 7"	50 - 250 °F 0 - 120 °C Push button selected Internal only	N/A		
DHT761	7 - 200	1-1/2"-SAE 4 Bolt Flange	5000		23 lbs	10" x 8.5" x 8"				
DHT801HP	7 - 200	1-7/8"-24 SAE ORB	7000		23 lbs	10" x 8.5" x 8"				

Options

Analog output for stripchart, computer input etc, 1.5 VDC proportional output circuitry

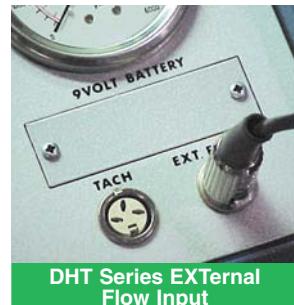
Carry case with O-ring seal, made of rugged structural resin, airtight to 30 feet under water, purge valve, 2" hard rubber wheels, fold down handles and adjustable interior dividers. Dimensions: Inside; 29"L x 18"W x 10.5"H. Outside; 31.5"L x 20.75"W x 11.5"H, shipping wt. 17 lbs

Remote flowmeters

Remote Flowmeters for DHT & HT Series Testers				
Model Number	Without Load Valve	With Load Valve	Max. psi	Inlet / Outlet Ports
LT5	*	3000	#4 JIC Male Flare	7370
LT16	*		#6 JIC Male Flare	6155
LT50	*	6000	1-1/16"-12 #12 SAE O-ring	630
LT125	*		1-5/16"-12 #16 SAE O-ring	120
LT250	LT250R	7000	1-7/8"-24#24 SAE O-ring	57
LT400	LT400R		1-1/2" SAE 4 Bolt Flange	88
N/A	LT500HP	5000	1-1/2" SAE 4 Bolt Flange	57
LT500	LT500R		REMOTE INPUTS	TACH.
LT750	LT750R		INTERNAL TEMP.	OFF RESET
LT760	LT760R		B TEST	TEMP TACH.

* Order separate Load Valve model # HV100

Flowmeters include flow & temperature output on same connection. See pages 10 & 11 for specifications.



HT Series Portable Hydraulic Testers

Standard Features:

- Analog readout
- Bi-directional Loading Valve with "INTERPASS™" Burst Disc Protection
- Bi-directional flow & pressure
- Flow Accuracy $\pm 2\%$ FSD
- Dual Scale, US & Metric
- High/Low flow scales offer improved resolution
- Portable (HT402 only 18 lbs)
- 50 - 250 °F Temp. Scale
- rpm input circuitry



- Battery test switch position
- Remote input allows two flows & temperatures to be monitored
- CMOS low-power circuitry
- "Auto-Off" extends battery life
- Pressure gauge is connected to shuttle valve and always reads high pressure side of load valve
- HTM400 model has equivalent to NEMA4 waterproof rating.

CE Approved

Available with
SAE or BSP ports

Model Number	Flow Range gpm		Inlet/Outlet Ports	Max. Pressure psi	Factory Calibrated Remote Flow Input	Weight	Dimensions W x D x H Inches	Temperature Range Internal & Remote	rpm Range 1 PPR - Phototach		
	Low Scale	High Scale									
HT252	2 - 12	2 - 60	1-5/16"-12 #16-SAE ORB	6000	LT50 0.5 - 12 gpm	18 lbs	9.5" x 8.5" x 7"	50 - 250 °F 0 - 120 °C Dual Scale	300 - 6000		
HT402	3 - 25	3 - 100			LT125, 1 - 25 gpm				300 - 10000		
HT502-HP	4 - 40	4 - 120	1-7/8"-24 UN #24 SAE ORB	7000	LT250, 2 - 40 gpm	23 lbs	10" x 8.5" x 8"	300 - 8000	300 - 8000		
HT752	6 - 30	6 - 150	1-1/2"-SAE 4-Bolt Flange	5000	LT125, 1 - 25 gpm	22 lbs			300 - 11000		
HT762	7 - 50	7 - 200			LT250 2 - 50 gpm				300 - 7500		
HT802-HP	7 - 50	7 - 200	1-7/8"-24 UN #24 SAE ORB	7000	LT250 2 - 50 gpm	23 lbs			300 - 7500		

Options

Analog output for stripchart, computer input etc, 1.5 VDC proportional output circuitry

Carry case with O-ring seal, made of rugged structural resin, airtight to 30 feet under water, purge valve, 2" hard rubber wheels, fold down handles and adjustable interior dividers. Dimensions: Inside; 29"L x 18"W x 10.5"H. Outside; 31.5"L x 20.75"W x 11.5"H, shipping wt. 17 lbs

Remote flowmeters; see page 8

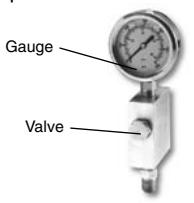
Hydraulic Testers

Accessories for DHT & HT series testers

FT1475 Low Pressure Gauge Kit

For accurate pressure readings below 600 psi. Valve set to cutout at 550 psi thereby protecting gauge from overpressure.

Comprises:
600 psi liquid filled pressure gauge.
Automatic cutout valve.
12" long microbore hose.
2 x 1/4" NPT test point.



TH2 Phototach Kit (HT)

Light reflected off reflective tape on rotating member generates pulse for speed indication. Order BA10 base separately.

Comprises: Phototach head, 20 ft. connecting cable & 2 x 'D' cell batteries.

TH4IR Phototach (DHT/DHCR)

Infrared beam reflected off rotating shaft generates pulse for TACH input. Powered by tester internal battery. includes 20 foot cable. Order BA20 mag base separately.



Remote Flow Input

The HT and DHT series portable testers feature a remote flow & temperature input socket located on the front panel adjacent to the pressure gauge. This versatile feature allows the tester to act as a flow & temperature readout for a second LT series flowmeter.

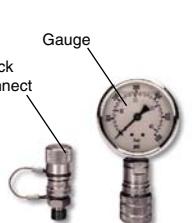
HT series testers remote flow input is factory calibrated to a specific model of LT flowmeter as denoted in the table above.

DHT series testers can be calibrated in the field to any LT series flowmeter, effectively making the DHT series a 0.03 to 210 gpm tester with $\pm 1\%$ accuracy. Using this feature is very easy, simply connect the LT flowmeter to the EXT (DHT series) input or Remote Flow (HT series) input using the FT7950 Flow/Temp cable, select EXT or Remote Flow with the front panel rotary switch, and read two flow and temperature inputs from one location.

FT1470 Low Pressure Gauge Kit

For accurate pressure readings below 600 psi.

Comprises:
SPG25-600-S-1/4
600 psi liquid filled pressure gauge.
1 x GD2504-1A gauge connector 1 x PT2502-12
1/4" NPT test point.



BA10 / BA20 Magnetic Base and Flex Arm

Rugged steel flex arm and high strength magnetic base allow the sensor head to be mounted and aimed quickly & easily.

DHC Series Portable Hydraulic Testers

Hydraulic Testers

Standard Features:

- Digital readout
- Bi-directional flow & pressure
- Flow accuracy 1% of Reading
- Remote flow & temperature input is easily field calibrated for any LT series flowmeter
- US & Metric engineering units



- 6,000 psi pressure gauge
- 50 - 250 °F temperature range
- rpm input circuitry
- 9 V battery powered
- CMOS low-power circuitry
- “Auto-Off” extends battery life

CE Approved

**Available with
SAE or BSP ports**

Model Number	Flow Range gpm Accuracy ±1% of indicated Reading	Porting	Max. psi	Weight	Dimensions W x D x H inches	Remote Flow & Temp Input	Temperature Range		
DHC50	0.5 - 10	1-1/16"-12 #12 SAE ORB	6000*	8 lbs	9.5 x 8.5 x 7	DHC series testers are easily calibrated in the field to any Webster LT series flowmeter	0 - 120 °C internal or external Units switch selectable		
DHC125	1 - 30								
DHC300	2 - 60			9 lbs	10 x 8.5 x 8				
DHC400	3 - 100								
DHC151	1.5 - 40			8 lbs	9.5 x 8.5 x 7	No Remote Inputs	50 - 250 °F internal only		

* may be used to 8700 psi for intermittent test applications @ 2.6:1 safety factor
Order separate load valve HV100 for flows up to 30 gpm, model HV400 for flows up to 100 gpm, see page 8

DHCR Series Portable Hydraulic Testers

Standard Features:

- Bi-directional flow & pressure
- Flow accuracy 1% of Reading*
- Remote digital readout
- 2 Flow & temp inputs
- US & Metric units selectable
- 50 - 250 °F temperature range
- rpm input circuitry
- 9 V battery powered
- 6,000 psi pressure gauge



DHCR Series Testers include DHCR Readout, flowmeter and 6 ft. connecting cable.

- Available with two pressure gauges mounted in front panel
- “Auto-Off” extends battery life
- Remote flow & temperature input is easily field calibrated for any LT series flowmeter
- Available loading valve with **“INTERPASS™”** burst disc safety feature

CE Approved

**Available with
SAE or BSP ports**

Model without Load Valve	Inlet / Outlet Ports	Max. psi	Weight lbs.	Flow Range gpm ±1% of indicated Reading	Model No. with Load Valve	Inlet Outlet Ports	Max. psi	Weight lbs.	Temp Range	rpm Range					
DHCR05	#4JIC Male	3000	7	0.03 - 2.5 ^a	DHCR05R	# 4 JIC/#8 SAE ORB	3000	10	50 - 250 °F 0 - 120 °C	300 - 6000					
DHCR16	#6 JIC Male			0.05 - 4 ^a	DHCR16R	# 6 JIC/#8 SAE ORB									
DHCR50	1-1/16" #12 SAE ORB	6000	8	0.5 - 15	DHCR50R	1-1/16"-12 #12 SAE	6000	11							
DHCR125				1 - 30	DHCR125R										
DHCR300	1-5/16" #16 SAE ORB		9	2 - 60	DHCR300R	1-5/16"-16 #16 SAE ORB		12							
DHCR400				3 - 100	DHCR400R										
DHCR500	1-1/2" SAE 4 Bolt	5000 ^b	21	4 - 125	DHCR500R -HP	1-7/8"-24 SAE ORB	7000	26							
DHCR750				6 - 150	DHCR750R	1-1/2" SAE 4 Bolt	5000 ^b								
DHCR760				7 - 200	DHCR760R										
DHCR800 HP	1-7/8"-24 UN #24 SAE	7000	22	7 - 200	DHCR800R HP	1-7/8"-24 UN #24 SAE	7000	27							

^a ± 1% of full scale for DHCR05 - DHCR16 - ^b 6000 psi at 3.1:1 safety factor

HC Series Portable Hydraulic Testers

Standard Features:

- Bi-directional flow readings
- Analog readout
- Dual scale, US & Metric units
- High/Low flow scales
- 50 - 250 °F temp. scale
- rpm input circuitry
- Battery test switch



- 6,000 psi pressure gauge
- CMOS low-power circuitry
- "Auto-Off" extends battery life
- Turbine flowmeter
- Optional load valve
- Flow accuracy 2% of FSD

CE Approved

Available with
SAE or BSP ports

Model Number	Flow Range gpm Accuracy ± 2% FSD		Porting	Max. psi	Weight	Dimensions W x D x H	Temperature Range	rpm Range		
	Low Scale	High Scale								
HC50	0.5 - 5	0.5 - 10	1-1/16"-12 #12 SAE ORB	6000	8 lbs	9.5 x 8.5 x 7	50 - 250 °F 0 - 120 °C Dual Scale	300 - 8000		
HC125	1 - 6	1 - 30								
HC300	2 - 12	2 - 60			9 lbs	10 x 8.5 x 8				
HC400	3 - 25	3 - 100								

Order separate load valve HV100 for flows up to 30 gpm, *model HV400 for flows up to 100 gpm, see page 6

HCR Series Portable Hydraulic Testers

Standard Features:

- Bi-directional flow & pressure
- Remote analog readout
- Dual scale, US & Metric units
- High/Low flow scales
- Battery test switch
- 50 - 250 °F temp. scale
- rpm input circuitry



- 6,000 psi pressure gauge
- CMOS low-power circuitry
- "Auto-Off" extends battery life
- Flow accuracy 2% of FSD
- Remote flowmeter
- Available loading valve with "INTERPASS™" burst disc safety feature

HCR series testers include HCR Readout, flowmeter with or without loading valve and 6 ft. connecting cable.

CE Approved

Available with
SAE or BSP ports

Model without Load Valve	Inlet / Outlet Ports	Max. psi	Weight lbs.	Flow Range gpm Accuracy ± 2% FSD		Model No. with Load Valve	Inlet Outlet Ports	Max. psi	Weight lbs.	Temp Range	rpm Range		
				Low Scale	High Scale								
HCR05	#4JIC Male	3000	7	0 - 1.0	0 - 2.5	HCR05R	#4 JIC Male	3000	9	50 - 250 °F 0 - 120 °C	300 - 6000		
HCR16	#6 JIC Male			0 - 2.0	0 - 4.0	HCR16R	#6 JIC Male						
HCR50	1-1/16" #12 SAE ORB	6000	8	0.5 - 5	0.5 - 10	HCR50R	#12 SAE ORB #8 SAE ORB	6000	9				
HCR125				1 - 6	1 - 30	HCR125R							
HCR300	1-5/16" #16 SAE ORB	5000	9	2 - 12	2 - 60	HCR300R	#16 SAE ORB	5000	11				
HCR400				3 - 25	5 - 100	HCR400R							
HCR750	1-1/2" SAE 4 Bolt	22	22	5 - 30	6 - 150	HCR750R	1-1/2" SAE 4 Bolt	5000	26				
HCR760				7 - 40	7 - 200	HCR760R							
HCR800HP	#24 SAE ORB	7000	24	7 - 40	7 - 200	HCR800 HPR	#24 SAE ORB	7000					

Accessories: DHC, DHCR, HC & HCR Series Testers

FT1475 Low Pressure Gauge Kit

For accurate pressure readings below 600 psi. Valve set to cutout at 550 psi thereby protecting gauge from overpressure.

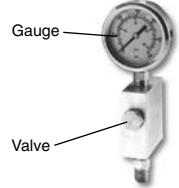
Comprises:

600 psi liquid filled pressure gauge.

Automatic cutout valve.

12" long microbore hose.

2 x 1/4" NPT test point.



FT1470-40 Low Pressure Gauge

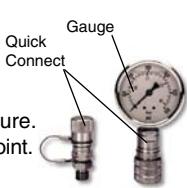
For accurate pressure readings below 600 psi. Glycerine filled 2.5" 600 psi gauge.

Comprises:

600 psi liquid filled pressure gauge.

1x GD2504-1A direct gauge connector; make under pressure.

1x PT2502-12, 1/4" NPT test point.



TH1A Phototach Kit (HC & HCR)

Light reflected off reflective tape on rotating member generates pulse for speed indication. for HC, HCR and DHCR

Comprises: Phototach head, power pack with 2 x 'D' cell batteries & 20 ft. connecting cable

TH4IR Phototach (DHT DHCR)

Infrared beam reflected off rotating shaft generates pulse for TACH input. Powered by tester internal battery. includes 20 foot cable.



BA10 / BA20 Magnetic Base and Flex Arm

Rugged steel flex arm and high strength magnetic base allow the sensor head to be mounted quickly & easily.

HV100 Loading Valve, 30 gpm

HV200 Loading Valve, 50 gpm

- "INTERPASS™" Rupture Disc Protection, bypasses over pressure oil internally - no external oil loss.
- Bi-directional
- 6,000 psi
- Three stage precision metering
- 1/4" NPT Pressure Gauge Port
- 30 gpm max flow



HV400 Loading Valve, 100 gpm, #16 SAE Ports

HV800 Loading Valve, 200 gpm, #24 SAE Ports

- "INTERPASS™" Rupture Disc Protection, bypasses over pressure oil internally - no external oil loss.
- Pressure Gauge Port with shuttle valve
- Bi-directional
- 6,000 psi
- Pressure balanced for low handle effort



Carrying Cases

FT5539: Rugged double wall injection molded plastic, for (D)HC Tester, HV100 load valve & TH1A tachometer.



FT9061: Rugged double wall injection molded plastic, for (D)HCR Tester, flowmeter with built-in load valve, connecting cable & TH1A tachometer.



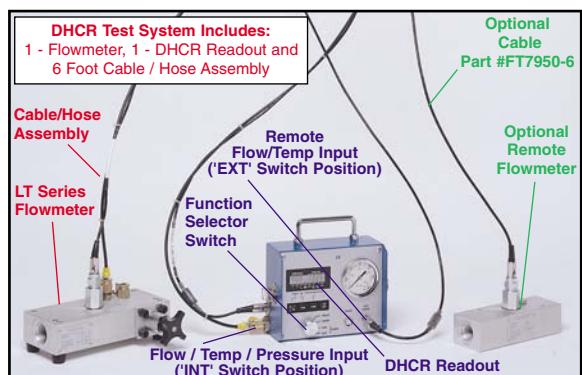
Remote Flowmeters with Built-In Bi-directional Loading Valves

(D)HCR testers are supplied with readout, connecting cable and a flowmeter with or without loading valve. A second remote flowmeter may be added to the (D)HCR system to allow a single user to take two flow, two temperature & two pressure readings from one location. See pages 10 - 11 for flowmeter specifications.

Remote Flowmeters for DHC & DHCR Series Testers					
Model Number	Flow Range gpm	Max psi	Inlet / Outlet Ports	Nominal 'K' Factor PPL	
without load valve	with load valve				
LT5	*	3000	#4 JIC Flare	7370	
LT16	*		#6 JIC Flare	6155	
LT50	*	6000	#12 SAE O-ring	630	
LT125	*		1-5/16"-12 #16 SAE O-ring		
LT250	LT250R		1-7/8"-24 #24 SAE O-ring	120	
LT400	LT400R	3 - 100			
N/A	LT500HP	4 - 130	7000	57	
LT500	LT500R	4 - 130	5000	88	
LT750	LT750R	6 - 170		57	
LT760	LT760R	7 - 210	1-1/2" SAE 4 Bolt Flange		

* Order Separate Loading Valve Model # HV100

Flowmeters include flow & temp. output on same connection for use with readouts and Data acquisition equipment. See pages 10 & 11 for & specifications.



Monitor two flow, pressure & temperature inputs from one location!

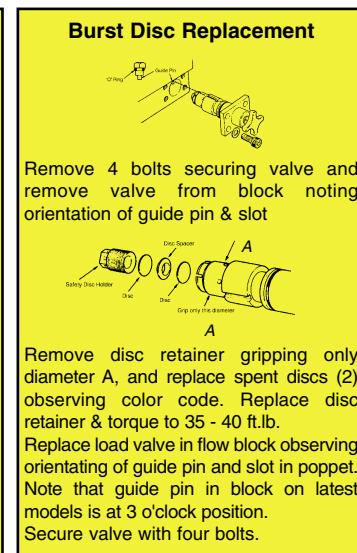
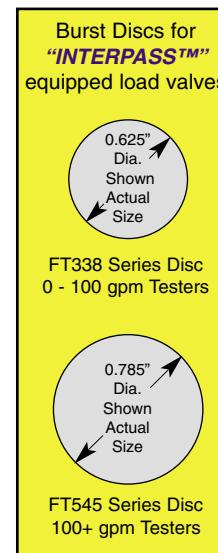
Miscellaneous Items for Portable Testers

Description

- **9 Volt lithium battery** for severe cold weather tester operation
- **1.5 volt phototach batteries** (2 required)
- **Change standard pressure gauge** (**FT1375-3** = 3000 psi, **FT1375-4** = 4000 psi, **FT1375-18** = 8500 psi)
- **8,000 psi Pressure Gauge** & burst disc holder for intermittent high pressure use. (HT252 or HT402 only)
- **Non-Standard flow scales**, made to customer specifications
- **FT5146** Adaptor Kit for (D)HT752 & (D)HT762, 5000 psi; 1.5" SAE 4 bolt to 2" BSPP
- **MP00046** Adaptor Kit for (D)HT752 & (D)HT762, 5000 psi; 1.5" SAE 4 bolt to 1.5" NPT
- **MP00073** Adaptor Kit for (D)HT752 & (D)HT762, 5000 psi; 1.5" SAE 4 bolt to 1-5/16"-12 #16 ORB
- **MP00073** Adaptor Kit for (D)HT752 & (D)HT762, 5000 psi; 1.5" SAE 4 bolt to 1-5/8"-12 ORB
- **FT578A** Adaptor Kit for (D)HT252 & (D)HT402, 6000 psi (8 pieces)
converts from 1-5/16"-12 #16 SAE O-ring to #12 JIC Flare, #16 JIC Flare, 3/4" NPT, 1" NPT
- **FT6198** Adaptor Kit for (D)HC125 & (D)HT50, 6000 psi (6 pieces)
converts from 1-1/16"-12 #12 SAE O-ring to #12 JIC Flare, #16 JIC Flare, 3/4" NPT, 1" NPT
- **3 year extended warranty** on portable testers.

Replacement Burst Discs (10 per Package)		
0 - 100 gpm Testers & Load Valves		
Models HT252 / DHT252 / HT402 / DHT402 / HV100 / HV400		
Part Number	Color Code	Nominal Burst Pressure psi
FT338-6	Red	6000
FT338-5	Blue	5000
FT338-4	Green	4000
FT338-3	Yellow	3000
100+ gpm Testers		
Models HT752 / DHT752 / HT762 / DHT762		
FT545-7	Orange	7000 (DHT502/802-HP)
FT545-6	Red	6000
FT545-5	Blue	5000

Note: Two discs required per replacement (Bi-directional Testers)



Repair & Calibration Services



We can repair it!

Description

- Certificate of Conformity, reissue
- 3 pt. NIST traceable flow test c/w data & graph
- 10 pt. NIST traceable flow test c/w data & graph
- 3 pt. NIST traceable pressure test c/w data & graph
- 10 pt. NIST traceable pressure test c/w data & graph
- Operating manual, reissue
- HT series tester complete rebuild (1 year warranty)*
- DHT series tester complete rebuild (1 year warranty)*

Repairs quoted on a time & material basis

*(complete rebuilds include turbine assembly, load valve, pressure gauge, new electronic board, user manual, labor, calibration and certificate of conformity)

We offer calibration and repair services with traceable flow & pressure facilities for all products.

We also offer Trade-Up discounts for obsolete or non-repairable models.

Positive Displacement & Turbine Flowmeters

Standard Features:

- Bi-directional capability
- Accuracy \pm 1% FSD
- Repeatability \pm 0.5%
- Flow & temperature output
- High Tensile aluminum body, steel internal's

- Pressure rating 6,000 psi on units to 100 gpm
- Pressure rating 5,000 psi on units above 100 gpm
- Pressure rating 7,000 psi on LT500R-HP, LT750-HP-TB & LT800-R-HP
- Self energized magnetic pickup compatible with Webster equipment
- Powered transducer pickup optional
- Subplate mounting version
- Supplied with 10 point calibration curve



Available with JIC or BSP ports

Positive Displacement Flowmeters

Model No.	Flow Range (gpm)	Pressure Rating (psi)	Ports
LT5	0.03 - 2.5	3000	7/16" JIC Male Flare
LT16	0.05 - 4.0	3000	9/16" JIC Male Flare

Precision gear type flowmeter for low flow monitoring. Designed for hydraulic fluids with viscosity less than 28 Cts. (150 SUS).

Includes temperature output compatible with Webster test equipment.

Order 5 pin electrical connector part # FT7884



Available with SAE or BSP ports

LT Series Turbine Flowmeters

Model No.	Flow Range (gpm)	Pressure Rating (psi)	Ports
LT25	0.25 - 7	6000	# 8 SAE ORB
LT50	0.5 - 15	6000	# 12 SAE ORB
LT125	2.0 - 30	6000	# 12 SAE ORB
LT250	2.0 - 65	6000	# 16 SAE ORB
LT400	3.0 - 100	6000	# 16 SAE ORB
LT500	4.0 - 130	5000	1.5" SAE 4 Bolt Flange
LT750	6.0 - 170	5000	1.5" SAE 4 Bolt Flange
LT760	7.0 - 210	5000	1.5" SAE 4 Bolt Flange
LT 800HP	5 - 150	7000	# 24 SAE ORB

Standard grade flowmeter used in a wide variety of hydraulic monitoring applications. Suitable for hydraulic oils, glycol and water-oil emulsions. 1/8" sensor port standard.

Includes temperature output compatible with Webster test equipment. Order 5 pin electrical connector part # FT7884. Optional powered transducer available for extended low range capability. *-TB Denotes heavy duty high pressure, twin bearing design available on some models, consult sales office.

LT-R Series Turbine Flowmeter with Load Valve



Available with SAE or BSP ports

Model No.	Flow Range (gpm)	Pressure Rating (psi)	Ports
LT250-R	2.0 - 65	6000	1-5/16" UNF -16 SAE ORB
LT400-R	3.0 - 100	6000	1-5/16" UNF -16 SAE ORB
LT500-R-HP	5.0 - 130	7000	1-7/8" UNF -24 SAE ORB
LT750-R	6.0 - 170	5000	1.5" SAE 4 Bolt Flange
LT760-R	7.0 - 210	5000	1.5" SAE 4 Bolt Flange
LT800-R-HP	8 - 210	7000	1-7/8" UNF -24 SAE ORB

-R suffix denotes flowmeter with built-in Bi-directional load valve and exclusive "INTERPASS™" technology. Compatible with portable testers, data acquisition units or panel mounted flow readouts. 3 x 1/4" sensor ports are standard, one on shuttle valve. Includes temperature output compatible with Webster test equipment. Order 5 pin electrical connector part # FT7884. Optional powered transducer available for extended low range capability.

CT Series Turbine Flowmeters with Conditioned Linear Output



New

New

0 - 5 VDC Three Wire Linear Output

Model #	Flow Range	Pressure	Ports
CT15-V	0 - 4 (15 lpm)	6000	#8 SAE ORB
CT50-V	0 - 13 (50 lpm)	6000	#12 SAE ORB
CT125-V	0 - 30 (125 lpm)	6000	#12 SAE ORB
CT300-V	0 - 80 (300 lpm)	6000	#16 SAE ORB
CT400-V	0 - 105 (400 lpm)	6000	#16 SAE ORB
CT750-V	0 - 200 (750 lpm)	5000	#24 SAE ORB
CT400R-V	0 - 105 (400 lpm)	6000	#16 SAE ORB (with built-in load valve)
CT750HPR-V	0 - 200 (750 lpm)	7000	#24 SAE ORB (with built-in load valve)

Note: Order electrical connector part # FT9445

4 - 20 mA, Two Wire Linear Output

Model #	Flow Range	Pressure	Ports
CT15-mA	0 - 4 (15 lpm)	6000	#8 SAE ORB
CT50-mA	0 - 13 (50 lpm)	6000	#12 SAE ORB
CT125-mA	0 - 30 (125 lpm)	6000	#12 SAE ORB
CT300-mA	0 - 80 (300 lpm)	6000	#16 SAE ORB
CT400-mA	0 - 105 (400 lpm)	6000	#16 SAE ORB
CT750-mA	0 - 200 (750 lpm)	5000	#24 SAE ORB
CT400R-mA	0 - 105 (400 lpm)	6000	#16 SAE ORB (with built-in load valve)
CT750HPR-mA	0 - 200 (750 lpm)	7000	#24 SAE ORB (with built-in load valve)

Note: Order electrical connector part # FT9445

Flowmeters



Sub Plate Mount Flowmeters

Model No.	Flow Range (gpm)	Pressure Rating (psi)
LT5-SP*	0.03 - 2.5	3000
LT16-SP*	0.05 - 4	3000
LT50-SP**	0.5 - 15	6000
LT125-SP**	2.0 - 30	6000
LT250-SP**	2.0 - 65	6000
LT400-SP**	3.0 - 100	6000

* positive displacement type flowmeter
** turbine type flowmeter

-SP suffix denotes flowmeter designed for sub-plate mounting. Use with portable testers or panel mounted flow readouts. LT50-SP and larger size flowmeters supplied with 1 x 1/4" sensor port.

Includes temperature output compatible with Webster test equipment. Order 5 pin electrical connector part # FT7884. Optional powered transducer available for extended low range capability. NOTE: Positive displacement type flowmeter designed for fluids with viscosity below 28 centistokes (150 SUS).



Available with SAE or BSP ports

Compact Turbine Flowmeters

Model No.	Flow Range (gpm)	Pressure Rating (psi)	Ports
LTE50	0.5 - 15	6000	# 12 SAE ORB
LTE125	2.0 - 30	6000	# 12 SAE ORB
LTE250	2.0 - 65	6000	# 16 SAE ORB
LTE400	3.0 - 100	6000	# 16 SAE ORB

E denotes flowmeter designed for compact installation. Unique flow conditioning permits use of elbows on inlet and outlet ports. Supplied with 2 x 1/4" sensor ports. Includes temperature output compatible with Webster test equipment. Order electrical connector FT7884. Optional powered transducer available for extended low range capability.

Unidirectional Turbine Flowmeters



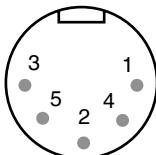
Model No.	Flow Range (gpm)	Pressure Rating (psi)
LTU1350	10 - 350	6000

Accurate measurement in one direction. Zinc plated steel body. 2" #32, 4-bolt SAE Code 62 flange ports. No temperature output. Order 2 pin MS style connector part # FT7945.

Cables / Options / Accessories

Model No.	Description
FT7566	Powered flow transducer option extends low end range of turbine flowmeter. To order add -PT extension to model #, e.g.; LT50-PT
FT7092	20 foot cable for FT7566 optional powered transducer.
FT7950-6	Cable, Flow & Temperature, 20 ft., PVC jacket rated at 140 °F, Use to connect LT series flowmeter to portable tester remote input. Includes FT7884 connector.
FT8525-6	Cable, Flow & Temperature, 20 ft., PVC jacket rated 140 °F Use to connect LT flowmeter to C1000 / MC104 and portable testers remote input. Includes FT7884 connector.
FT8384-6	Cable, Flow, 20 ft. PVC jacket rated 140 °F Use to connect LT flowmeter to DF130 readouts. FT7884 connector included.
FT994	5 PIN DIN Style connector, snap lock.
FT7884	5 PIN Amphenol Style connector, screw lock for LT / LTR / LTE flowmeters
FT9445	5 Pin Female Cable Socket for CT Turbines & TP200 Temp Sensor
FT7945	2 pin MS style electrical connector for LTU1350
MP00209	Teflon jacket cable for Skydrol applications, rated at 190 °F, wired as FT7950-6
FT9233-6	Cable, Flow and/or Temperature for CT turbines, 20 foot

Standard LT series transducer pinout



- Pin # 1 Flow Signal
- Pin # 2 Flow Common
- Pin # 3 Temp
- Pin # 4 Temp Common
- Pin # 5 Shield

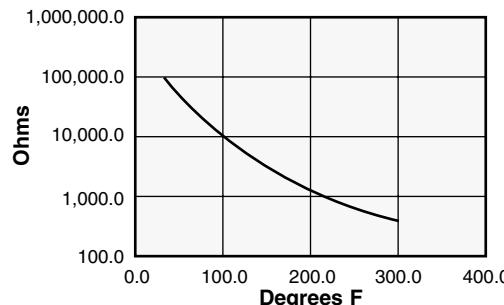
(View from Solder Side of Pins)

LT series flowmeter pin-out. Use electrical connector part # FT7884 (MS style connector available, consult sales office)

Note: Nominal resistance between pins 1 & 2; 4.5 KΩ ± 10%. Nominal resistance between pins 3 & 4; 30KΩ @ 70 °F.

Resistance vs. Temperature

Thermistor in LT flowmeter nominal 30k Ohms @ 70°F



Thermistor characteristics LT series flowmeter connector pins 3&4

Pressure Transducers

Pressure Transducers

Standard Features:

- Stainless steel wetted parts
- Chemical vapor deposition polysilicon strain gauge
- 1/4" NPT Male Port
- Over Pressure: WPT 2 x rated 5000 psi & below
1.5 x rated 6000 psi range LPT: 1.5 x rated



- Operating temperature -40 to 250 °F
- LPT series: 100 mV output (10 mV/V)
- WPT Series: 4 - 20 mA or 0 - 10 VDC (12 - 36 VDC ext)
- Static error band ± 0.25% FSD
- Life cycle: 100 million cycles

Ordering Code: Select Model No., full scale pressure, port male thread and signal output from table at left.

i.e.: LPT6000-P-N-MV is a LPT series, 6000 psi transducer with 1/4" NPT male connection and 100 millivolt output, compatible with Webster data loggers. Mating male connector included.

Use LPT millivolt (mV) output with Webster MC104 or C1000 data acquisition equipment (see pages 17 - 20). Use WPT series milliamp (ma) or Volt (V) with Webster panel mount pressure readout DP130 (see pg 14) Order cable assembly FT9322-6 for connection to DP130

Ordering Table for LPT Series Transducer Select Model, Range, Pressure, Units, Thread & Output				
Model	Rated Pressure psi	Pressure Units	Male Thread	Output
LPT	0 - 15	P = psi	N = 1/4" NPT	*MV = 100MV
	0 - 30	B = bar	*S = # 4 SAE	**MA = 4 - 20MA
	0 - 60	0 - 1500		B = 1/4" BSP **V = 0 - 10 V
	0 - 100	0 - 3000		
	0 - 150	0 - 6000		
	0 - 300			Absolute pressure ranges also available, consult sales office.

*LPT series only, **WPT Series only

LPG Series Heavy Duty Pressure Transducers

Standard Features:

- Stainless steel wetted parts
- Polysilicon strain gage
- 1/4" NPT male thread
- Over Pressure: 3 x rated or 22500 psi whichever is less
- Operating temperature -40 to 250 °F



- Output signals: 0 - 10V, 0 - 100 mV & 4 - 20 mA
- 50 mW power usage (mV model)
- Less than 5 mS response (mV model)
- Static error band ± 0.20% FSD
- Life cycle: 100 million cycles

Ordering Code: Select full scale pressure and signal output from table at right.

i.e.: LPG7K5-N-MV is a 7500 psi transducer with 1/4" NPT male connection and 100 millivolt output. Use cable pt# MP00069.

Use millivolt (mV) output with Webster MC104 or C1000 data acquisition equipment (see pages 18 - 21).

Use milliamp (mA) or Volt (V) output with Webster digital panel meter DP130 (see page 14)

Ordering Table for LPG Series Transducer Select Model (LPG), Range (10k), Thread (N) & Output (MV) LPG 10k-N-MV-1000 psi transducer with 1/4" NPT threads & 0-100 MV output			
Model	Rated Pressure psi	Male Thread	Output
LPG	0 - 100 (K1)	0 - 7500 (7K5)	N = 1/4" NPT **MV = 100MV
	0 - 600 (K6)	0 - 10000 (10K)	S = # 4 SAE MA = 4 - 20MA
	0 - 3000 (3K)	0 - 15000 (15K)	V = 0 - 10 V
	0 - 6000 (5K)	0 - 20000 (20K)	
	0 - 6000 (6K)	25000 +	

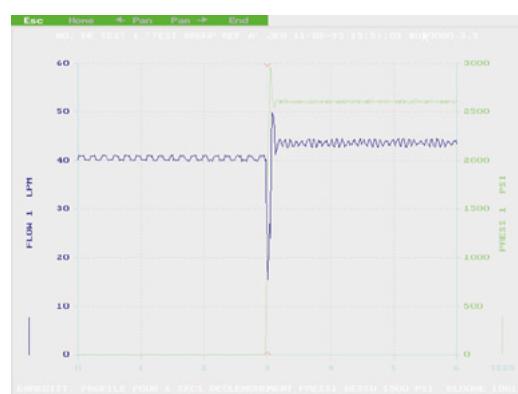
**Use 0 - 100 mV model for Webster Instruments data acquisition equipment (pages 17 - 20). Use mA or V output for DP130 panel mount readout (see page 14) Consult sales office for ranges from 25,000 to 150,000 psi.

Application Note

When selecting a pressure transducer and associated display equipment for test and diagnostic work, be sure to consider response time. It is common to have pressure spikes considerably higher than the relief valve setting. These spikes typically last less than 5 milliseconds but over a long period of time can have a detrimental effect on components and system performance. Many pressure transducers do not respond quickly enough to reflect these spikes, and most display equipment is not capable of capturing a signal faster than 200 milliseconds.

'Webster Instruments' LPT and LPG series transducers are fast as well as accurate. Used in conjunction with our MC104 or C1000 display equipment, pressure spikes are easily captured, displayed and printed in graph form on a laptop or PC.

See what you've been missing?!



Temperature Sensors

TP201 Temperature Sensor

Precision thermistor bead for accurate temperature readings from 50 to 250 °F at 6000 psi. Nickel plated probe with 1/4" NPT male threads installs directly into high pressure lines for fast response.

Use with Webster MC104, C1000, and portable testers.

- 50 to 250 °F
- 6000 psi.
- 1/4" NPT male fitting
- Nickel plated steel housing
- 5 Pin DIN connection



New TP200 Temperature Transmitter

Range: 32 - 302 °F (0 - 150 °C) outputs available: three wire 0 - 5 VDC (Model # TP200V) or two wire 4 - 20 mA (Model # TP200mA). #4 SAE or 1/4" NPT male port rated at 6900 psi and integral 5 pin electrical plug. Order mating connector part # FT9445

Use with DT130 readout, data acquisition systems, PLC's or process meters.

- Outputs: 4 - 20 mA or 0 - 5 VDC
- Overall length 4"
- Insertion length 0.5"
- 304 SST wetted parts
- #4 SAE, 1/4" NPT or 1/4" BSP connection



Non-Contact Infrared Thermometer

quickTEMP

Features:

- Non-Contact Temperature
- °F / °C Selectable Switch
- 0 to 600 °F (-18 to 315 °C)
- Pocket Size Portability
- One Second Response
- Continuous Reading
- Six-Second Temperature Hold
- Laser-Sighting Available
- CE Optional

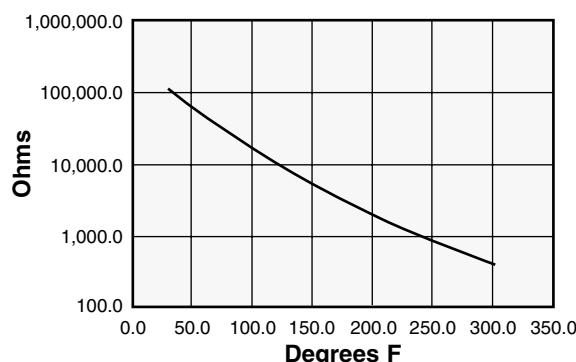


Model

QT1
QTL1
(QTL1 has laser sighting)
Carry Case included

Resistance vs. Temperature

TP201/PT1-1000 thermistor nominal 30k Ohms @ 70 °F



MT1A Magnetic Speed Pickup

For accurate rotational speed - target sensing.

- Range: 300 - 10,000 rpm (1PPR)
- 3.0" L x 3/8" NPS thread
- Two locking nuts
- Monitor shaft key or Keyway.
- Can be used to sense gear teeth for improved performance below 300 rpm.
- Self energized magnetic pickup
- Mounting bracket not included
- Use cable part # FT8525-6
- Use with DS130, MC104, C1000 & portable test equipment.



MP00022 / 54ZT Powered Speed Pickup

Accurate - no minimum speed target sensing.

- Range 0 - 10000 rpm
- Power 5 to 18 VDC
- Current sink output
- 1.25" long x 0.625 Dia.
- Threaded with locknuts
- Air gap 0.005" to 0.030"
- 10 foot cable included
- Mounting bracket not included
- Use with DS130 readout only



TH1A Phototach Kit (HC & HCR)

Light reflected off reflective tape on rotating member generates pulse for speed indication. for HC, HCR and DHCR

Comprises: Phototach head, power pack with 2 x 'D' cell batteries & 20 ft. connecting cable



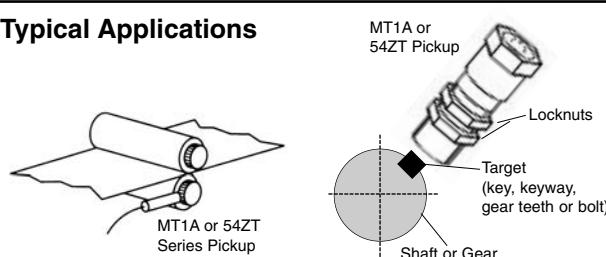
TH4IR Phototach (DHT DHCR)

Infrared beam reflected off rotating shaft generates pulse for TACH input. Powered by tester internal battery. includes 20 foot cable.

BA10 / BA20 Magnetic Base and Flex Arm

Rugged steel flex arm and high strength magnetic base allow the sensor head to be mounted quickly & easily

Typical Applications



Digital Panel Mount Readouts

Flow, Pressure, Temperature & Speed Readouts & Complete - Calibrated Test Systems

Standard Features:

- Large LED readout supplied calibrated to sensor
- Compact panel mounting only 3.6" behind panel
- Flow, pressure, temperature or speed inputs
- Factory calibrated with certificates of conformity.
- NIST traceability available
- Simultaneous 10V & 4 - 20 mA analog output

- Hi / Low alarm / 5 AMP Form C contacts option
- Flow totalizing for DF130
- Integral mounting clips and removable screw terminal blocks speed installation
- UL / CUL / CE approval
- Universal 90 - 230 VAC or 9 - 36 VDC power

Digital Flow Readouts & Test Systems

Special Package Pricing
See pages 10 - 11 for sensors



DF130 4 Digit Flow Rate or Total Readout, 90 - 230 VAC powered.
Use with LT, LTE, LT-S P or LT-R series flowmeters.
Order a complete factory calibrated test system.

Ordering Example

Complete Flow Test System: **DF130-S-AC-LT25**

includes DF130 readout, LT25 turbine (0.025 - 7 gpm) flowmeter,
FT8384-6 connecting cable (20 ft.) & factory calibration.
DF130 Dimensions: 4.04"W x 2.19"H x 3.87"D (3.6" depth behind panel)
DF130 Panel Cutout: 3.62" x 1.77" (+0.04" / -0.0")
See page 15 for readout options (analog outputs, relays etc)

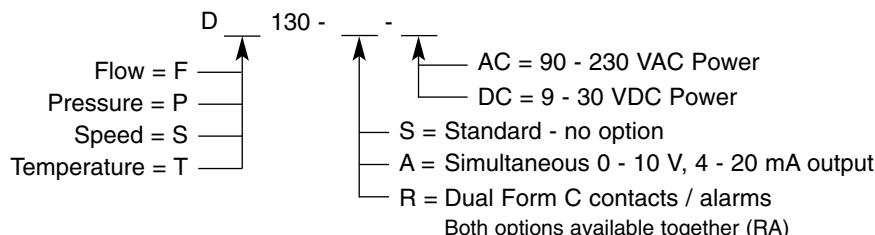
Digital Flow Test Systems - Special package pricing
±1% FSD (turbine type) over normal range.

Includes DF130 readout, LT flowmeter, 20 foot cable & factory calibration
(See pages 10 & 11 for flowmeter specifications)

Model No.	Max Flow Range	Pressure (psi)
DF130-S-AC-LT5	0.04 - 2.5*	3000
DF130-S-AC-LT16	0.05 - 4.0*	
DF130-S-AC-LT25	0.25 - 7	6000
DF130-S-AC-LT50	0.5 - 15	
DF130-S-AC-LT125	1 - 30	
DF130-S-AC-LT250	2 - 65	
DF130-S-AC-LT400	3 - 100	
DF130-S-AC-LT500	4 - 130	
DF130-S-AC-LT750	6 - 170	5000
DF130-S-AC-LT760	7 - 210	
DF130-S-AC-LTU1350	10 - 350*	6000

Options & Accessories for Digital Panel Mount Readouts

Options for Digital Panel Meters



Signal Conditioning / Flow Switch Units

FC2420, Single or dual channel unit converts the pulse rate output from flowmeters into a 4 - 20 or 0 - 16 mA signal. Linearized output accuracy of $\pm 1\%$ of actual. True current source allows summing of two outputs. RISC processor, for fast update option of 1 mS +1 period of incoming signal.



RA2, single channel pulse rate to analog converter, 110 VAC powered, used with LT flowmeters to convert flow signal to 4 - 20 mA or 0 - 10 VDC output. Interface with chart recorders or other instruments requiring analog inputs (update time > 250 mS).



RS1, single channel adjustable flow switch, 110 VAC powered, used with LT flowmeters to actuate dual form C (SPDT) contacts at adjustable preset flow. Rated 6 A @ 28 VDC



Model No.

FC2420-1

FC2420-2

FT8435-1

FT8436

RA2

RS1

IFMA

ASTC

Description

1 Channel Flow rate to milliamp proportional output (1 mS response)

2 Channel Flow rate to milliamp proportional analog output (1 mS response)

FC2420 Cable, 3', to 25 way D style connectors - both ends
(Use with FT8436 connector)

25 terminal DIN breakout connector for FC2420 (Use with FT8435-1 cable)

RA2 Flow rate to Proportional Analog Output

(response time > 100 mSec) (0 - 10 VDC, 4 - 20 mA, 0 - 1 mA)

RS1 Flow Switch, adjustable, 110 VAC powered

Dual form C contacts rated 5 A @ 110 VAC

IFMA Flow rate to Proportional Analog Output

(0 - 10 VDC, 4 - 20 mA, 0 - 1 mA) (response time < 100 mSec)

ASTC In-line amplifier, boosts low flow signals

Recommended for use with LT5, LT16, LT50 & RA2, RA3 or RS1

Cables for use with Remote Sensors

Prewired cables for fast & easy connection of sensors to the appropriate readout or portable hydraulic tester. All Cables listed are 20 ft (6 meter) long. (other lengths available) and include mating connectors to match sensors and readouts. PVC coated rated at 140 °F ambient (teflon coated available for Skydrol applications).

Part No.	Feet	Connects from	Connects to
FT7950-6	20	LT Flowmeter	HT/DHT Remote Input
FT7951-6	20	LPT Pressure Sensor	C1000 / MC104
FT9322-6	20	WPT Pressure Sensors	DP130
FT8384-6	20	LT Flowmeter/MT1A	DF130 / DS130
FT9644-6	20	TP200-mA Temp. Sensor	DT130 Readout
FT7015	20	FVC-3 signal converter	Output device
FT5702	20	Readout	Strip Chart Recorder
MP00069	20	LPG pressure transducer	MC104/DP130/C1000
FT9644-6	20	CT / TP200 flowmeter	DF130 / DT130 readout
FT8525-6	20	LT Flowmeter	C1000 / MC104

Cables available in other lengths. Cable available with teflon jacket for Skydrol applications. Consult sales office

Portable Readouts

DPM200 Portable Pressure Reference Meter

Standard Features:

- High Accuracy Digital Pressure Readout
- Displays two pressures, two peak pressures and pressure differential (P1 - P2)
- Pressure Transducers built-in
- Rugged metal case
- Linearization gives accuracy to $\pm 0.25\%$ FSD
- Battery powered



- M16 x 2 or PD style pressure connections
- Portable, weighs 8 lbs.
- Push-button selection of pressure units; psi, bar, Kg/cm² MPS
- Printer output port for optional printer
- Optional Carry Case & Printer
- See page 26 for test point and hoses.

Model No.
DPM200

Description
Display two (2) input, two (2) static pressure readings, two (2) peak pressure readings & one (1) pressure differential with printer output port, 2 hoses and 2 test points

Accessories
Portable Printer
Carry Case

24/40 Column battery powered printer & cable
18" x 20" x 9" injection molded case

HPM Handheld Digital Test System

Standard Features:

- Digital Readout of Pressure, Temperature, Flow, Differential Pressure* (*requires two transducers of same range).
- Available with 2, 4 or 6 inputs
- Data log 250,000 readings in HPM460
- Windows Compatible Software
- Accuracy: Pressure within 0.5% of full scale Flow within 1% of full scale.
- Pressure up to 9000 psi, peaks to 14,000 psi.



- Auto Calibration / sensor recognition
- CT-SR Series flowmeters with Sensor Recognition 0.1 - 160 gpm at pressures to 6000 psi
- Battery Powered standard 9 Volt battery. Optional rechargeable unit.
- Min / Max memory
- Printer Output (HPM400C, 440 / 460)

Model No.

Description

HPM400A
FT9272

2 Input readout, rechargeable 9 VDC battery & charger
Charger for HPM4XXA/C handheld readout

HPM400C
FT9274

2 Input readout, rechargeable 9 VDC battery, printer output
Printer, converter & cable for HPM4XXC



HPM440

4 input readout / data logger with RS232 data output

HPM460

6 input readout / data logger with RS232 data output

HPM COMM

Windows software for data transfer from HPM440 / 460 to PC

PT015

210 psi pressure transducer with integral 10' cable and M16 x 2 female pressure connector.



PT63

900 psi Pressure transducer with integral 10' cable and M16 x 2 female pressure connector

PT630

9000 psi Pressure transducer with integral 10' cable and M16 x 2 female pressure connect

"Kit pricing is available for HPM400/HPM440 & HPM460 kits, Contact Sales Office"

Portable Readouts

Sensors for HPM Handheld Digital Test System



CT50-SR 0.5 - 15 gpm turbine flowmeter, #12 SAE O-ring ports, with signal converter and M16 x 2 test point



CT300-SR 2.5 - 80 gpm turbine flowmeter, #16 SAE O-ring ports, with signal converter and M16 x 2 test point

CT500-SR 6 - 160 gpm turbine flowmeter, #24 SAE O-ring ports, with signal converter and M16 x 2 test point

CT300R-SR 3 - 80 gpm turbine flowmeter, #16 SAE O-ring ports, with built-in load valve, signal converter with integral 10' cable and M16 x 2 test point

CT600HPR-SR 6 - 160 gpm turbine flowmeter, 7000 psi, with built-in load valve, signal converter and M16 x 2 test point

(Note: All CT turbines include M16 x 2 Test point and M10 port for installation of TP400 temperature sensor)



HV100 Optional load valve for CT50

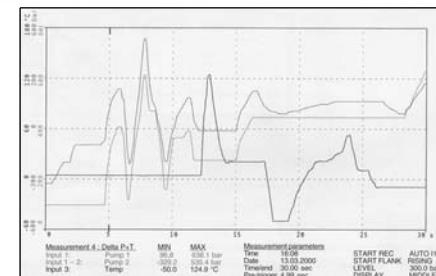
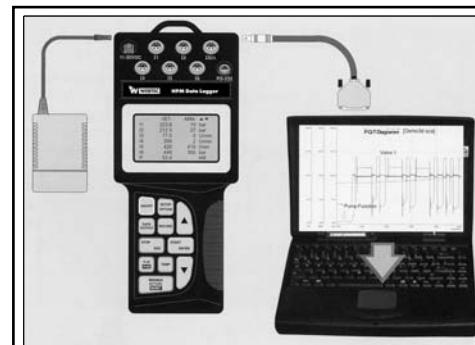
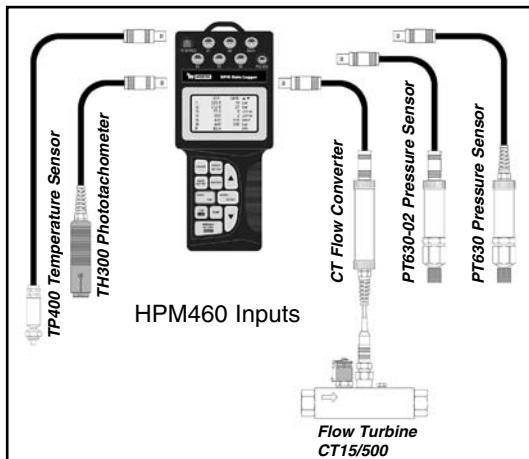
TP400 Temperature sensor, M10 x 1 thread, 50 - 250 °F c/w 6 foot cable

FT8305 Small carry case fits 1 x HPM Readout, 2 x Pressure Transducer & cables



FT8850 Large carry case fits 1 x HPM Readout, 2 x PT Pressure Transducers, 2 x CT Turbine blocks & 4 x cables

"Kit pricing is available for HPM400 / HPM440 & HPM460 kits, Contact Sales Office"



Typical contents of
HPM440 und HPM460 Kits

MC104 Readout & Data Logger

Standard Features:

- MC104: 4 pressure, 2 temperature, and 2 flow or speed inputs
- Simultaneous display of flow, pressure, temperature & rpm.
- High contrast LCD display
- Peak pressure, pressure differential and horse power display
- Portable & Rugged
- User friendly menu system
- RS232 port, user configured
- Built-in graphics printer



MC104

- Non-volatile memory stores 96000 readings in 9999 tests
- **WEBCOMM™** software available for Real-Time data from MC104 to PC or laptop
- **Windows** compatible data transfer software included
- Dual power supply, 110 VAC & rechargeable batteries with built-in charger
- Low battery indicator
- Selectable US / Metric Units
- Prints to dot matrix printer via serial port

Model No.

MC104, (FT8829-2)

Description

4 pressures, 2 temperature & 2 flow or speed inputs
Ver. 5.0, 8 Configurable inputs & built-in printer

MC104, (FT8829-7)

As FT8829-2 but without printer
Printer half stores cables and pressure transducers

Options & Accessories

Model

FT8525-6

Description

Cable, 20 ft. for flow and temperature

FT7081-6

Cable, 20 ft. for pressure transducer

FT7083

Cable with 25/9 pin adaptor, 10 ft. RS232 port to PC comm port

FT7390

Spares kit, printer paper, ribbon, fuses (incl w/ MC104)

incl. w/ MC104

110 VAC Power cable for built-in battery charger

incl. w/ MC104

Printer cable, PT # FT7952, RS232 to MP100 printer port

Carry case

Rugged structural resin case, airtight O-ring seal purge valve,

2" hard rubber wheels, fold down handles and adjustable interior dividers.

Dimensions: Outside; 31.5" L x 20.75" W x 11.5" H, shipping wt. 17 lbs.

WEBCOMM™

MC2PC

Software for real time data transfer and graph plotting

Windows compatible software for data transfer

between MC104 and laptop or PC (included with MC104)

Rugged - Accurate - Versatile



Users say . . .

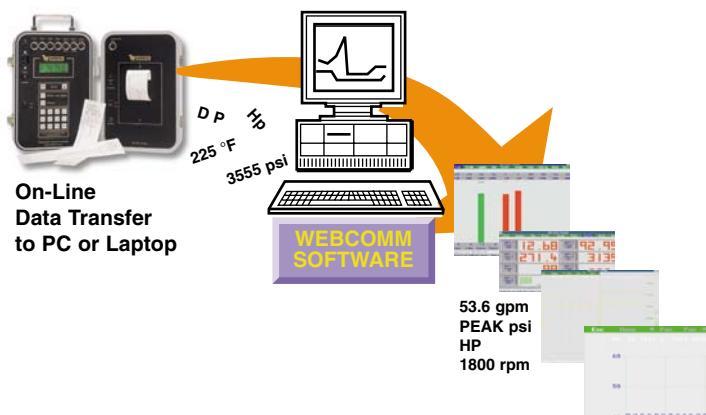
'Unequaled in the field'

'An excellent piece of equipment'

'The one piece of test equipment I wouldn't be without'



WEBCOMM™ Data Transfer Software



Standard Features:

- Easily transfer tests from MC104 memory to laptop or PC via serial port
- Supports On-Line data logging from MC104 to PC or Laptop
- User friendly menu system
- View test data on screen in tabular or graph form
- Automatic graph generation
- Transfer test titles from PC to MC104 memory
- Supports many types of printers, plotters and deskjets
- Save test data to hard disc or in Lotus 123 format
- User defined test names download from PC to MC104



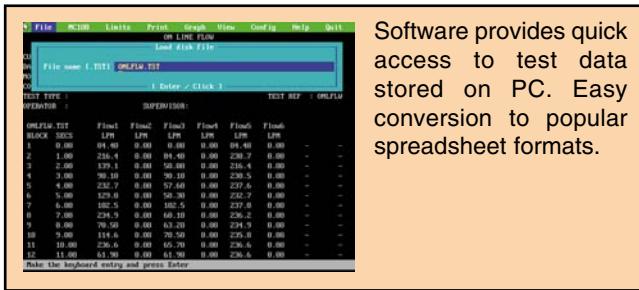
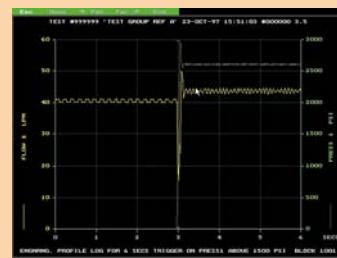
Real Time Graphs

Transfer data from MC104 to laptop or PC for on-screen graphs



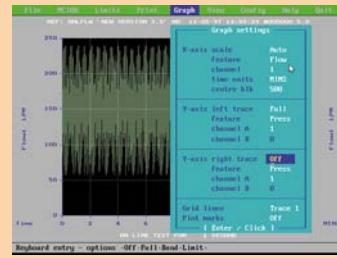
Transfer tests to PC in real time or store in MC104 battery backed memory for transfer or graph printing at a later date.

Generate graphs of flow vs. pressure - on screen as easily as three keystrokes. Then print to color printer.



Software provides quick access to test data stored on PC. Easy conversion to popular spreadsheet formats.

Control over axis scaling, which inputs are graphed, plot marks and grids. Support for a variety of printers.



Fully Compatible Sensors for the MC104

See pages 10 - 13 for flow, pressure, temperature and speed sensors which are fully compatible with the MC104 portable data logger.

- LT, LTE or LT-SP Series flowmeters.
- LPT / LPG Series Pressure Transducers
- TH1A Phototachometer or MT1A Magnetic Pickup.



C1000 Hydraulic Data Acquisition System



Versatile Turnkey System



Fast Professional Results

Features

- **Turnkey System** supplied fully configured
- **User Friendly** software & pull down menus
- **Measure, Display & Datalog** up to 28 flow, pressure, temperature, rpm or other digital & analog inputs
- **ViscoCorrect™** optional viscosity compensated flow readings $\pm 1\%$ of indicated reading
- **Viscosity** readings displayed & logged
- **Pressure** accuracy to within $\pm 0.5\%$
- **Pressure** response 2000 Hz. (0.5 milliseconds)
- **Engineering** units selectable by user
- **Virtual Channels** allow math operations on input values (Hydraulic horsepower, torque ..)
- **Large** clear display with 1 inch characters.
- **Display** 28 inputs and 16 virtual channels on screen simultaneously (44 maximum)
- **Hands Free Operation** foot switches allow tests to be logged without keyboard input
- **Datalog** 40,000 readings in unlimited tests (limited by hard drive)
- **Graph Printing** with auto or manual scaling, color control, pan and zoom
- **Recording Time** 0.5 mS per reading in Profile Log
- **Customized** test titles can be configured to include date, job number, operator, test name, serial #, comments and more.

Overview

The C1000 PC Based Hydraulic Data Acquisition Test System provides the complete solution for production, repair/rebuild and development testing of key parameters including; flow, pressure, temperature, viscosity and speed in hydraulic circuits and components.

This turnkey system provides complete flexibility for changing sensor range, data logging, test file and screen layouts all can be tailored to meet individual needs. The system is very easy to use with the on screen pull down menu system - no complicated programming knowledge is needed.

Up to 40,000 readings in each test are stored and made available for later analysis using popular spreadsheet programs or printing flow and pressure curves with the utilities provided.

Fully compatible with Webster sensors, signal conditioning is provided for easy setup and flexibility.

Software

Easy-to-use pull down menu system provides control over files, screen layout, system configuration, printers, graph printing, data logging and data storage. Superpanel mode displays 8 of up to 28 inputs in large digital or bar graph form. Normal mode displays up to 28 readings in user defined screen layout. Virtual channels allow calculations to be performed on input values and displayed such as torque, differential pressure or hydraulic horsepower.



C1000 Hydraulic Data Acquisition System

Specification

Processor Unit

Pentium, 133 MHz., 2.1 Gb Hard Drive, DOS OS, Floppy Disc: 3.5", 8 Mb RAM, 6/14 slot ISA backplane, 1 x Parallel printer port

Printer Requirements:

IBM Compatible or EPSON FX series printer with IBM extended character set, Deskjet, Inkjet printers and HP plotters

Computer Mounted Cards

Digital Cards

Standard IBM ISA BUS 8 bit slot
16 Bit input pre-scaler, 32 bit period counter, Clock: 10 MHz.
5 MHz. Max input frequency.

Analog Cards

IBM ISA 8 bit / 16 bit slot
IRQ selected via links, 1 open IRQ required (2 - 5)
12 bit A/D, single channel 100 KHz. Max.
16 channel multiplexor, IRQ controller
Connection via 37 way 'D' style connector

Signal Conditioning Cards

3 Channel Flow & Temperature Card

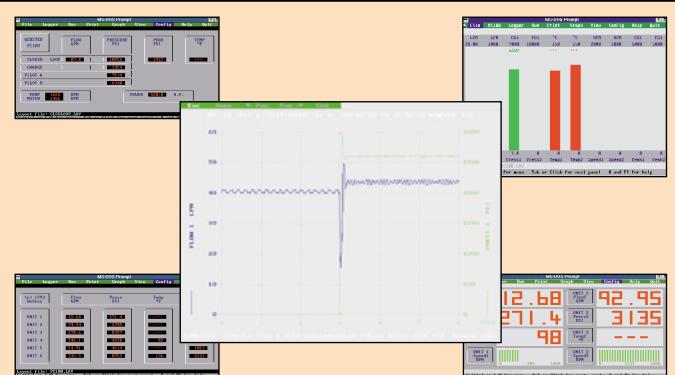
Single Euro Card 100 x 160 mm, 3 Unit height 9 HP width front panel. Input connections: 3-Pin DIN connectors

8 Channel Pressure Card

Single Euro Card 100 x 160 mm. Independent variable gain instrumentation amplifiers. Nominal input sensitivity 100 mV.
10/5 V excitation voltage available.
Input connections: 5-Pin DIN

Modular Rack Housing

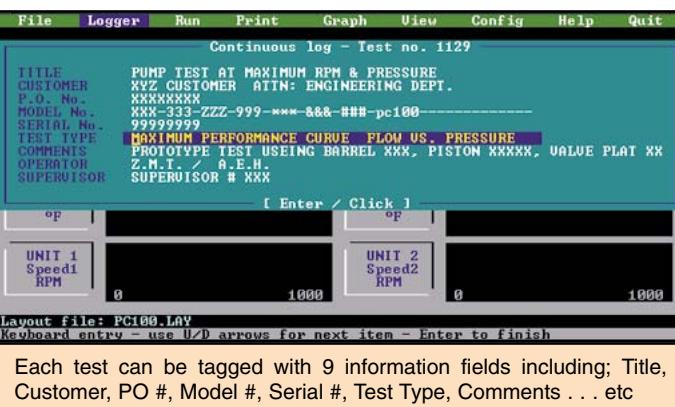
Cards supplied installed in standard 19" rack format
Backpanel and interconnect module fitted as standard.



Many different user defined screen layouts can be configured to suit a particular application and recalled from memory at any time.



Data capture as fast as 1/2 millisecond can be quickly and easily graphed on screen and printed on a variety of supported color printers.



Each test can be tagged with 9 information fields including; Title, Customer, PO #, Model #, Serial #, Test Type, Comments . . . etc

C1000 Systems

Systems can be configured for your application with up to 16 analog (pressure / temp / torque) inputs and up to 12 digital (flow / speed / encoder) inputs. Order sensors separately, see pages 10 - 13 for compatible sensors.
Systems include software, processor, 2.1 GB HD, 3.5" FDD, ADC cards, signal conditioning rack, 15" SVGA monitor, keyboard, sensor calibration & interconnecting cables. Does not include sensors or sensor connecting cables.
C1000-1 systems include 19" rack assembly, CD ROM drive & 10/100 network card.

C1000-1/8/6/6 Inputs for 8 x pressure, 6 x Flow (or speed) & 6 x Temperature
C1000-1 systems include part # FT8427 19" rack enclosure measuring 25" x 24" x 24"

C1000-3/8/6/6 Inputs for 8 x pressure, 6 x Flow (or speed) & 6 x Temperature
C1000-3 systems are supplied in 19" rack mount format complete with interconnect cables.

Options, Upgrades & Accessories; Network card, CD-ROM, 17" or 21" SVGA monitor, 15.2" TFT flat panel display, pendant arm monitor mounting, Deskjet printers, NEMA 4/12 keyboard and special customer requests.

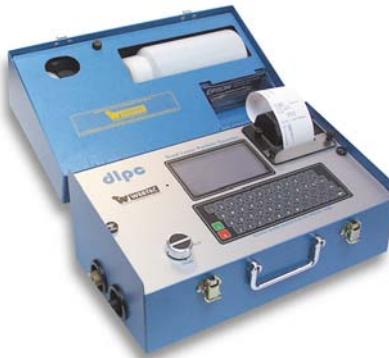


The C1000 system offers flexibility, reliability and sensor compatibility. No complicated setup or programming required makes it easy to use no matter the level of PC experience.

DLPC Dual Laser Particle Counter

Standard Features:

- 4 test methods - single, dynamic, triple and continuous
- Test until set cleanliness level is met
- Bottle sampler available
- Easy-to-use menu operation
- Enter test names using QWERTY keyboard



- Multi-language versions built-in
- Store minimum 150 tests in rolling memory
- Perform ~100 tests per battery recharge
- Display results on the screen
- Print results using built-in printer
- Download results to Windows software

A rugged, portable unit designed for measuring fluid contamination levels in the field, on the production floor or in the shop. Test online without shutting the system down or take bottle samples for later analysis. Display, print or download results to laptop or PC in ISO or NAS code format.

Rugged, portable unit

The DLPC is housed in a rugged metal case, manufactured to the same robust standard as all Webster test equipment. The unit is fully portable and designed for use in the field, in the shop or in the lab and is CE approved.

Easy to use

The DLPC is menu driven for fast set-up and sampling. The familiar QWERTY keyboard allows users to enter descriptive test data such as machine serial number. The 4.75"x2.5" backlit LCD indicates the status of a test as well as test results. The menu can be switched between English, Italian, French and German.

Unaffected by Pressure

Unlike other designs requiring low or constant fluid pressure, the DLPC can test online at pressures from 45 to 6000 psi and results are not affected by pressure or flow transients.

Manual Flush Valve

Cross-contamination of oil samples is hard to control and wastes time by giving inaccurate readings. The manual flush valve allows you to clean the test hose and sampling chamber before taking a sample. The flush time can be varied to suit the length of hose being used. The valve can be held down or left in a detent position for extended periods of flushing.

Test Online or from a Bottle Sample

The DLPC has four different test modes allowing you to carry out a single test, continuous test, dynamic test or triple test. Up to 150 tests can be stored in rolling battery backed memory.

Battery Powered

The DLPC has a built-in rechargeable battery and performs approximately 100 tests on a fully charged battery.

Export data to a PC

Export test data to a PC via the RS232 port and create detailed reports with optional Windows software.

Print results in ISO and NAS format

Print results automatically with the built-in printer or recall and print stored tests. Results are displayed and printed in ISO & NAS codes.

DLPC #W004691	TEST NUMBER	1.21/6/2001 9:28			
TEST REF. WEBTEC - DLPC	TEST REF.	WEBTEC - DLPC			
TEST TYPE: Normal Test	TEST TYPE	Normal Test			
NAS CLASS:-	NAS CLASS				
AB	5-15	15-25	25-50	50-100	100+ 00
NAS	5	3	4	4	00
ISO CODE 15113/9	SAMPLE VOLUME 15mL				
AB	/100ml				
5-15	7642				
15-25	199				
25-50	66				
50-100	22				
100+	6				

DLPC #W004691	TEST NUMBER	3.21/6/2001 9:55
TEST REF. WEBTEC - DLPC	TEST REF.	WEBTEC - DLPC
TEST TYPE: Dynamic Test	TEST TYPE	Dynamic Test
ISO CODE:-	ISO CODE	
15/13/7		
NAS CLASS 5 SAMPLE VOLUME 30mL		
AB	/100ml	/100ml
4	17800	23733
6	3445	4019
14	168	35
21	35	0
25	35	0
36	0	0
50	0	0
68	0	0

NAS

ISO

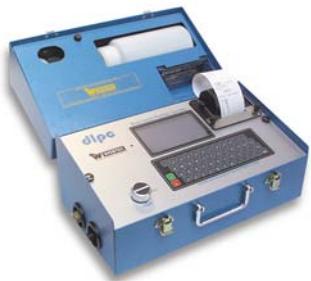
Accessories included

Test hoses, waste oil bottle, battery charger, spare printer paper and printer ribbon are housed in the lid ensuring everything you need to run a test is at your fingertips when you need it.

DLPC Dual Laser Particle Counter

DLPC

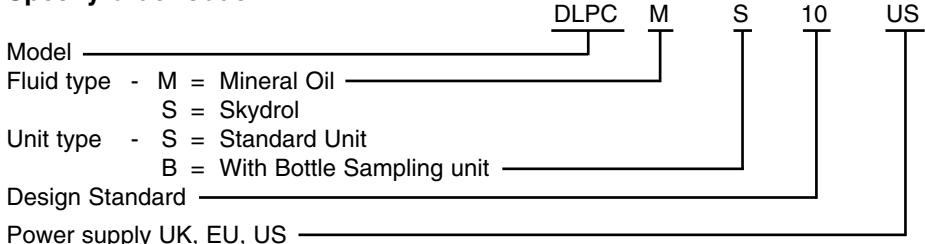
DLPC Dual Laser Particle Counter



The DLPC is housed in a rugged case including all the following accessories for online testing: -

- High pressure 1.5m micro-bore hose (M16 x 2) & hose coupler
- Waste bottle & clear plastic waste fluid hose
- Spare printer paper & ribbon
- 24 V transformer plug (110 / 220 V AC as specified)

Specify order code:



Optional DLPC Products

Bottle Sampling Kit



The kit contains everything required for bottle sampling including: -

- 3 glass sample bottles
- Sample syringe & disposable hoses
- 24 V pump / de-aeration unit (transformer plug supplied) and connecting hose
- Waste bottle & clear plastic waste fluid hose
- Spare micro-bore hose & hose coupler
- Spare printer paper & ribbon

Order code: DLPC - B - US

Specify power supply (UK, EU, US)

Windows Software Package

A complete software package to download, store, manage and analyse all tests carried out with the DLPC and print detailed reports - Microsoft Windows 9X / 2000 / NT compatible. Supplied with RS232 connection cable.

Order code: DLPC - VIEW



FI Series 'MEC-METER' In-Line Flowmeters

Standard Features:

- All mechanical operation - no batteries required
- EASY-READ™ Flow Dial
- Indicator magnet will not de-couple from piston magnet under surge flows
- Variable orifice meter
- Accuracy 4% FSD
- 1/4" NPT Pressure Gauge Port



- Quality brushed metal finish
- 6,000 psi (0.75" line size)
- 5,000 psi (1.5" line size)
- Panel mounting holes
- Dual US / Metric scales
- Flow switch option
- Thermometer option
- Reverse flow models available



Aluminum body. Calibrated for Oil. Ports 1 1/16" - 12 UN #12 SAE O-ring

Model #	Flow Range (gpm)	Min. Increment
FI750 - 15 - ASO	0.25 - 4	0.25
FI750 - 30 - ASO	0.6 - 8	0.5
FI750 - 60 - ASO	1 - 16	0.5
FI750 - 120 - ASO	1.5 - 32	1.0
FI750 - 180 - ASO	2 - 50	2.0



Aluminum body. Calibrated for Oil. Ports 3/4" NPSF

Model #	Flow Range (gpm)	Min. Increment
FI750 - 15 - ANO	0.25 - 4	0.25
FI750 - 30 - ANO	0.6 - 8	0.5
FI750 - 60 - ANO	1 - 16	0.5
FI750 - 120 - ANO	1.5 - 32	1.0
FI750 - 180 - ANO	2 - 50	2.0



Bronze body. Calibrated for Oil and Water. Ports 3/4" NPSF

Model #	Flow Range (gpm)	Min. Increment
FI750 - 30 - BNW	0.6 - 8	0.5
FI750 - 60 - BNW	1 - 16	0.5
FI750 - 120 - BNW	1.5 - 32	1.0



Bronze body. Calibrated for Oil. Ports 3/4" NPSF

Model #	Flow Range (gpm)	Min. Increment
FI750 - 180 - BNO	2 - 50	2.0

Aluminum body. Calibrated for Oil. Ports 1 7/8" - 12 UN #24 SAE O-ring

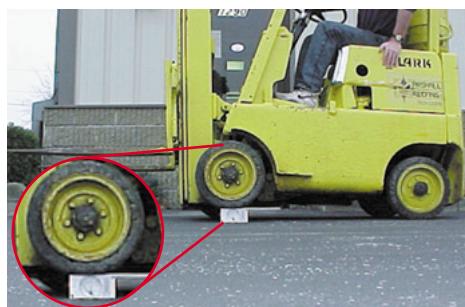
Model #	Flow Range (gpm)	Min. Increment
FI1500 - 200 - ASO	2 - 50	1.0
FI1500 - 300 - ASO	2.5 - 80	2.5
FI1500 - 400 - ASO	5 - 100	5.0

Bronze body. Calibrated for Oil. Ports 1 7/8" - 12 UN #24 SAE O-ring

Model #	Flow Range (gpm)	Min. Increment
FI1500 - 200 - BSO	2 - 50	1.0
FI1500 - 300 - BSO	2.5 - 80	2.5
FI1500 - 400 - BSO	5 - 100	5.0

See page 25 for option & accessories. Consult Sales Office for Reverse Flow Capability

'MECMETER'™
Flowmeters
Are Tough.



We parked a forklift on one to prove it!

FI Series 'MecMeter'™

Add a pressure gauge and a load valve for a low cost test kit
(see pgs. 23 + 25 for gauges & valves)

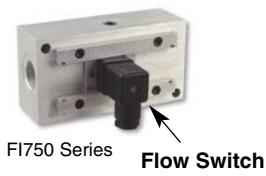


Rugged, Durable & Low Cost

Options & Accessories for FI Series Flowmeters

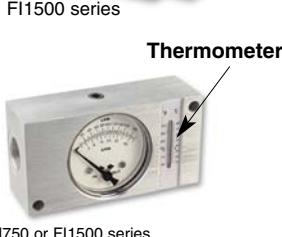
Option

Description



Single pole, 2 position reed switch for alarms etc. Set point is field adjustable.
When ordering add "S" to code.
FI750 meter will be drilled & tapped to accept flow switch mounting bracket
Example: FI750-60-ASOS

Dual contact, electronic flow switch (FI1500 series only)
When ordering add "E" to code
Example: FI1500-300-ASOE



Alcohol filled thermometer with dual temperature scale marked in °F and °C, range 50 - 180 °F.
When ordering add "T" to code.
Example: FI750-60-ASOT

FI750 or FI1500 series

HV100 & HV200 Loading Valve

Use with FI750 series flowmeters to create low cost test kit

- "INTERPASS™" Rupture Disc Protection, bypasses over pressure oil internally - no external oil loss.
- Bi-directional
- 6,000 psi
- Three stage precision metering
- 1/4" NPT Pressure Gauge Port
- 30 gpm - HV100, 50 gpm - HV200



HV400 Loading Valve, 100 gpm

Use with FI1500 series flowmeters to create low cost test kit

- "INTERPASS™" Rupture Disc Protection, bypasses over pressure oil internally - no external oil loss.
- Pressure Gauge Port with shuttle valve
- Bi-directional
- 6,000 psi
- Pressure balanced
- 100 gpm flow



FIK & RFIK Series Low Cost Hydraulic Test Kits

Standard Features:

- "EASY-READ" Flow Dial
- Flow accuracy 4% FSD
- Rugged steel case
- Includes Thermometer
- No batteries needed
- Built-in Precision Load Valve



Reverse Flow
RFIK Model

Uni-directional
FIK Model

- 6,000 psi liquid filled gauge
- "INTERPASS™" Rupture Disc Protection
- Portable, weighs only 11 lbs
- Simplifies hydraulic system setup
- Available in 5 flow ranges
- RFIK features free reverse flow

Calibrated for 28 cts Oil (150 SUS). Connections 1 1/16" - 12 UN #12 JIC Male Flare, others available.

Model #	Flow Range (gpm)	Min. Increment
FIK15 - ASOT	0.25 - 4	0.25
FIK30 - ASOT	0.6 - 8	0.5
FIK60 - ASOT	1 - 16	0.5
FIK120 - ASOT	1.5 - 32	1.0
FIK180 - ASOT	2 - 50	2.0

Free Reverse Flow Models

Model #	Flow Range (gpm)	Min. Increment
RFIK120 - ASOT	1.5 - 32	1.0
RFIK180 - ASOT	2 - 50	2.0

WP Series Low Cost In-Line Flowmeters

Standard Features:

- Advanced sharp edge orifice design provides measurement stability over wide viscosity range
- Reliable and economical design
- Direct reading, dual calibrated scale, gpm/lpm, special scales available.
- Available in Aluminum, Brass or Stainless Steel to suit fluid
- Line sizes $\frac{1}{4}$ " $\frac{1}{2}$ ", $\frac{3}{4}$ ", 1", 1- $\frac{1}{2}$ " & 2"
- Flowrates available:
0.05 to 150 gpm - liquids
1.5 - 1350 SCFM - gases
- Pressure rating: 3500 psi liquids, 1000 psi gases



- Accurate within 2.5% over midscale, 4% FSD
- Ports available in SAE, NPT or BSP
- Optional single or dual flow switch, high temperature versions and phosphate ester models.
- Unrestricted mounting in any orientation, horizontal, vertical or inverted.
- High strength cast ALNICO magnet for superior coupling performance

WP Series Flowmeter Ordering Guide

Model #	WP	Style	Size Code	Material	Pressure Rating	Fluid	Ports	Flow Range
Style								
BASIC in-line for liquid	= B*							
PNEUMATIC for air and gas	= G							
HI-TEMP 400 °F In-line	= H							
Hi-TEMP 600 °F In-line	= J							
Flow Alarm, 1 switch	= M							
Flow Alarm, 2 switches	= N							
Phosphate Ester In-line	= P							
Flow Transmitter	= R							
Hydraulic System Analyser	= T							
(See also FIK Series Test Kits)								
Size Code								
1/8" to 1/4"	= 2							
1/4" to 1/2"	= 3							
3/4" to 1"	= 4							
1 1/4" to 2"	= 5							
Material								
Aluminum	= A*							
Brass (See also FI Series)	= B							
Stainless Steel	= S							
Pressure Rating								
600 psi Max.	= 4							
(Air & Gases / Aluminum & Brass)								
1000 psi Max.	= 5							
(Air & Gases / Stainless Steel)								
3500 psi Max.	= 6*							
(Liquids / Aluminum * Brass)								
6000 psi Max. (see also FI Series)	= 7							
Fluid Media¹								
Air or Gas	= A							
Oil at 0.873 sg	= H*							
Water at 1.0 sg	= W							

Ordering Example: WPB4A-6HJ-50

Coding Breakdown:

B = Basic Meter
 4 = Size Code (3/4" or 1")
 A = Aluminum Body
 6 = 3500 psi Pressure Rating
 H = Oil calibration
 J = #16 O-Ring Ports
 50 = 5 - 50 gpm Flow Range Rating

We can cross reference other manufacturers. Give us the model number and we will quote a replacement.

Ports (All Female)	
Port Code	Size Code
I = 1/8" NPTF, dry seal	2
S = 1/4" NPTF, dry seal	3
A = 3/8" NPTF, dry seal	3
B = 1/2" NPTF, dry seal	3
C = 3/4" NPTF, dry seal	4
D = 1" NPTF, dry seal	4
*E = # 6 SAE ORB	3
*F = # 8 SAE ORB	3
*G = # 10 SAE ORB	3
*H = # 12 SAE ORB	4
*J = # 16 SAE ORB	4
K = 1-1/4" NPTF, dry seal	5
L = 1-1/2" NPTF, dry seal	5
M = 2" NPTF, dry seal	5
N = # 20 SAE ORB	5
P = # 24 SAE ORB	5
Q = # 32 SAE ORB	5
R = 3/8" BSPP	3
T = 1/2" BSPP	3
U = 3/4" BSPP	4
V = 1" BSPP	4
W = 1-1/4" BSPP	5
Y = 1-1/2" BSPP	5
X = 2" BSPP	5
Y = Cartridge	

Flow Range	
Code Liquid Air	Size Code
01 = 0.05 - 1gpm 1.5 - 12 SCFM	2 & 3
0.1 - 1 gpm water	3
02 = 0.2 - 2 gpm 4 - 23 SCFM	3
0.2 - 2.6 gpm 2 - 30 SCFM	4
05 = 0.5 - 5.0 gpm 5 - 50 SCFM	3
0.5 - 5.0 gpm 6 - 60 SCFM	4
*10 = 1 - 10 gpm 10 - 100 SCFM	3 & 4
*15 = 1 - 15 gpm 15 - 150 SCFM	3 & 4
*20 = 2 - 20 gpm 20 - 215 SCFM	4
*25 = 2 - 25 gpm 20 - 250 SCFM	4 & 5
*30 = 3 - 30 gpm 30 - 330 SCFM	4
40 = 4 - 43 gpm 30 - 400 SCFM	4
*50 = 5 - 50 gpm 40 - 500 SCFM	4
5 - 50 gpm 30 - 470 SCFM	5
75 = 8 - 75 gpm 30 - 750 SCFM	5
*88 = 10 - 100 gpm 150 - 900 SCFM	5
15 - 90 gpm water	5
*99 = 20 - 150 gpm 150 - 1300 SCFM	5

Key

- * Normally ships from stock
- 1 Consult sales office for special calibration or scale modifications

WP Series Flowmeters

Use model # " WP + Style + Size Code + Body Material to order
 Example: WPB4A-XX-XX is a Basic monitor, size code 4, Aluminum body.



Suitable for
 Water, Oil, Air,
 Corrosives ..

Style (Third position of model #)	Size Code (Forth position of model #)	Port Size
Basic Monitors	B	2
		3
		4
		5
		5
Pneumatic Air & Gas Monitors	G	2
		3
		4
		5
		5
Hi-Temp (400 °F) Monitors	H	2
		3
		4
		5
		5
Ultra Hi-Temp (600 °F) Monitors	J	2
		3
		4
		5
		5
Flow Alarms one switch	M	3
		4
		5
		5
Flow Alarms two switches	N	3
		4
		5
		5
Basic Phosphate Ester Monitors	P	2
		3
		4
		5
		5
Flow Transmitters 4 - 20 mA or 1 - 5 VDC	R	3
		4
		5
		5
Test Analyzers valve pressure gauge and thermometer	T	3
		4
		5
		5

WP Series test analyzers not available in high pressure versions. See RFIK & FIK series test kits for flows up to 50 gpm at pressures to 6000 psi.

Pressure Gauges

Liquid Filled (Glycerine) and Dry Pressure Gauges

SPG25 Series 2-1/2" Diameter Filled Gauge, 1/4" NPT connection
DPG25 Series 2-1/2" Diameter Dry Gauge, 1/4" NPT connection



Order Code:

Coding Example:

SPG25-4K-S-1/4" NPT is model #
for filled gauge, 4000 psi, stem
mount 1/4" NPT

SPG25

**

Model

Filled = **S**
Dry = **D**

Pressure psi	Order Code
30" Hg **	V
30" Hg / 30 psi	V/P
15	15
30 **	30
60	60
160 **	160
200	200
300 **	300
600 **	600
1000	1K
1500 **	1K5
2000	2K
3000 **	3K
4000	4K
5000 **	5K
6000 **	6K
10,000 **	10K
15,000	15K

Style Adder	
(Stem)	S
(Panel Clamp)	PC
(Center)	C
(Panel Flange)	PF

** Stock Sizes for Filled Gauges with 1/4" NPT Stem Mount

Pressure Test Kits

Model No.



PT100-4

Description

4 Gauge Kit with various adaptors.
All housed in rugged steel case.
Detachable lid serves as convenient
gauge panel.



PT100-6

6 Gauge Kit with various adaptors.
All housed in rugged steel case.
Detachable lid serves as convenient
gauge panel.



PT200-8

8 Gauge Kit with various adaptors.
All housed in Rugged Plastic Case.
gauges supplied with rubber protective covers.

Test kits can be modified or assembled to your specifications, Please consult sales office

Pressure Test Points, Hoses & Adaptors

Gauges, Test Kits
& Test Points

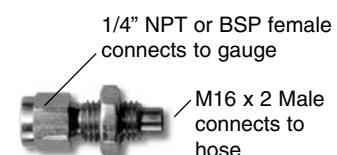
Pressure Test Points (With protective dust cap, connect under pressure to 6000 psi)

Model No.	Description (thread 'G')
PT2502-12	1/4" NPT
PT2502-11	1/8" NPT
PT2502-10	7/16" UNF
PT2502-9/16	9/16" UNF
PT2502-9	M16 x 1.5
PT2502-8	M14 x 1.5
PT2502-7	M12 x 1.5
PT2502-6	M10 x 1
PT2502-5	M8 x 1
PT2502-4	1/4" BSPP
PT2502-3	1/4" BSPT
PT2502-2	1/8" BSPP
PT2502-1	1/8" BSPT



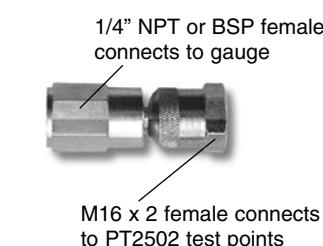
Pressure Gauge Connectors (Bulkhead; connects PH2503 hose to pressure gauge)

Model No.	Description
GA2504-1A	Adaptor, 1/4" NPT female to M16 x 2 male
GA2504-1	Adaptor, 1/4" BSP female to M16 x 2 male



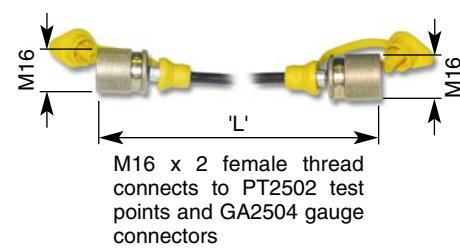
Pressure Gauge Connectors (Direct; connects pressure gauge directly to PT2502 test point)

Model No.	Description
GD2504-1A	Adaptor, 1/4" NPT female to M16 x 2 female
GD2504-1	Adaptor, 1/4" BSP female to M16 x 2 female



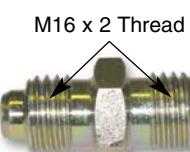
High Pressure Micro-Bore Hose, 6,000 psi

Model No.	Length 'L'
PH2503-1	1 foot
PH2503-2	3 foot
PH2503-3	6 1/2 foot
PH2503-5	13 foot
PH2503-20	20 foot
PH2503-**	Other lengths available



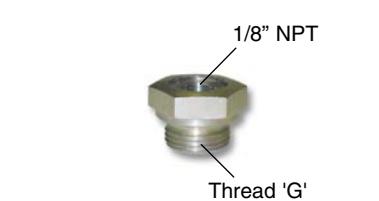
Hose Union (M16 x 2 Male-Male; connects two PH2503 hoses together)

Model No.	Description
PA2505	M16x2 Male to M16 x 2 Male



Adaptor Fittings (1/8" NPT female x Thread 'G')

Model No.	Description
PA2475-7A	G = 7/8" JIC Male Flare
PA2475-6A	G = 3/4" JIC Male Flare
PA2475-5A	G = 9/16" JIC Male Flare
PA2475-4A	G = M18 x 1.5
PA2475-3A	G = 3/4" BSPP
PA2475-2A	G = 1/2" BSPP
PA2475-1A	G = 3/8" BSPP



Quadrigauge Pressure Gauge



Glycerin Filled Gauge
measures only 8 3/8" in diameter, 4000 PSIG or 6000 PSIG maximum pressures

Low pressure gauge
in all models read to 30 in. Hg vacuum

Standard Gauge

measures only 6 7/16" in diameter. 3000 PSIG or 5000 PSIG maximum pressures

Standard Features:

- Four gauge functions vacuum, low, medium and high pressure
- Cut-out valve prevents excess pressure on low range gauges
- 1/8" NPT male hose connection
- Reads in psi, kg/cm², inches Hg and cms Hg.
- Compatible with mineral base hydraulic fluids
- Includes bleed screw
- Dust and moisture resistant case



Model Number	Gauge Type	Hose Length (Inches)	Vacuum "hg"	Low psi	Medium psi	High psi			
02-740-011	Dry	12	0 - 30	0 - 150	0 - 600	0 - 3000			
02-740-016						0 - 5000			
03-740-006		36				0 - 3000			
03-740-019*						0 - 5000			
12-740-006	Filled **	12	0 - 250	0 - 900	0 - 6000				
12-740-008		36							

* Denotes Stock Model ** Glycerine Filled Gauge

Thermometers

Non-Contact Infrared Thermometer

quickTEMP

Features:

- Non-Contact Temperature
- °F / °C Selectable Switch
- 0 to 600 °F (-18 to 315 °C)
- Pocket Size Portability
- One Second Response
- Continuous Reading
- Six-Second Temperature Hold
- Laser-Sighting Available
- CE Optional



Model

QT1

QTL1

(QTL1 has laser sighting)

Carry Case included

DT130-TP201

Digital Temperature System



Includes DT130 digital readout, TP200-mA temperature sensor & 20 foot connecting cable. Factory calibrated, 110 VAC powered (24 VDC optional) Panel Mounted cutout dimensions 3.62 x 1.77". Range: 30 - 302°F. Connection: 1/4" NPT. Pressure rating: 6900 psi.

Webtec Fixed & Variable Flow Control Valves

Quantity pricing available, contact sales office

ILFC Series In-Line Fixed Flow Control

Total flow capacity: 5 gpm, Max Pressure: 3625 psi. Pressure compensated flow control limits flow rate regardless of pressure differential across valve. Factory preset at flowrate between 0.5 and 5.0 gpm. Free (uncontrolled) flow in reverse direction. Steel components in aluminum body.



Flow Code	Flow Range (gpm)	Porting	
14	0.4 - 3.5	1/4" NPT	1/4" BSP
16	0.4 - 5	3/8" NPT	3/8" BSP

Ordering Code

Typical Code: ILFC 16 3 NPT
ILFC Valve Type _____
Flow Code (table 1) _____
Factory preset flow rate (gpm) _____
Ports (table 1 by flow code) _____

Valve Ordering Code

Model

ILFC16 or 14-(flow code)-(preset)-(ports)

VFC Series Pressure Compensated Constant Flow Valves

- Max flow capacity: 15 gpm, (free reverse flow)
- Max Pressure: 3000 psi
- Controlled flow: hand adjustable
- (Flow Code): 0.4 - 5 gpm (20), 0.53 - 10 gpm (40), 0.53 - 15 gpm (55)
- Ports Available by flow code: (PORT CODE)
- Flow code (20): 1/4" NPT (A), 1/4" BSP (B), #4 SAE (G)
- Flow code (40): 3/8" NPT (A), 3/8" BSP (B), #6 SAE (G)
- Flow code (55): 1/2" NPT (A), 1/2" BSP (B), #8 SAE (G)
- Order valve by **flow code** and **porting**.
- Ordering Example: VFC-40-A is a 10 gpm (40 lpm) valve with 3/8" NPT ports.



Valve Ordering Code

Model

VFC-20-(port code)

VFC-40-(port code)

VFC-55-(port code)

RFC Adjustable Throttle Valve

- In-line mounting, 4600 psi, 32 gpm
- Fine adjustment at low flow rates by rotating valve body in respect to valve stem
- Available with restricted flow in either or both directions
- Chemically blacked finish



Available line sizes:

1/4"

3/8"

1/2"

3/4"

Quantity pricing available, contact sales office

FV120 Series Fixed Priority Flow Divider

- Total flow capacity: 20 gpm, 3000 psi.
- Priority flow: factory set from 1 to 9 gpm in 1 gpm increments. (pressure compensated).
- Ports: Inlet 1/2" -14 NPT, Priority & relief drain 3/8"-18 NPT. Other ports available.

Ordering Code

Typical Code:

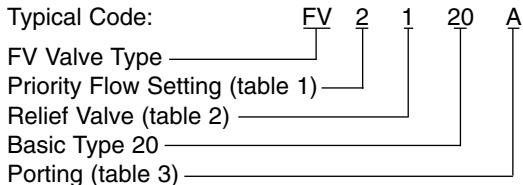


Table 1: Priority Flow

Code	Priority Flow
1	1 (gpm)
2	2 (gpm)
3	3 (gpm)
4	4 (gpm)
5	5 (gpm)
6	6 (gpm)
7	7 (gpm)
8	8 (gpm)
9	9 (gpm)

Table 2: Relief Valve

Code	Description
0	No Relief
1	With Relief

Table 3: Porting

Code	Inlet & Bypass	Priority & Relief
A	1/2" NPT	3/8" NPT
G	7/8"-14 SAE	9/16" -18 SAE

FV126 Series Fixed Priority Flow Divider

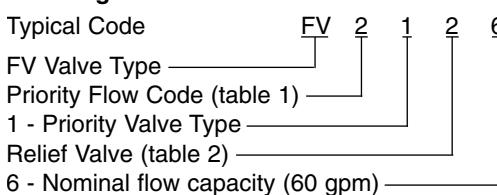
Total flow capacity: 60 gpm, Max Pressure: 2500 psi. Priority flow: factory set from 2 to 32 gpm in 2 gpm increments, 2 priority connections (pressure compensated).

Ports: Inlet & Bypass 1-5/8"-12 UNF, Priority (2) and relief drain 7/8"-14 UNF

(Priority Flow Code): Table 1, (Relief Valve): Table 2

Ordering Code

Typical Code



Code	Priority Flow	Code	Priority Flow
1	2 gpm	9	18 gpm
2	4 gpm	10	20 gpm
3	6 gpm	11	22 gpm
4	8 gpm	12	24 gpm
5	10 gpm	13	26 gpm
6	12 gpm	14	28 gpm
7	14 gpm	15	30 gpm
8	16 gpm	16	32 gpm

Valve Ordering Code

Model

FV (flow code) - 1 - (relief code) - 6

Code	Description
0	No Relief Valve
1	Adjustable Brute Force (Direct acting)
2	Adjustable Pilot Operated

FV200 Series Fixed Proportional Flow Divider

Flow capacity: 20 gpm, Max Pressure: 3000 psi. Minimum flow 8 gpm.

Proportional Priority flow: 3 ranges A/B ratios available: 25/75, 50/50 & 40/60 split, others available. (pressure compensated).

Ports: Inlet 1/2" -14 NPT, Outlet (2) 3/8"-18 NPT

Ordering Code

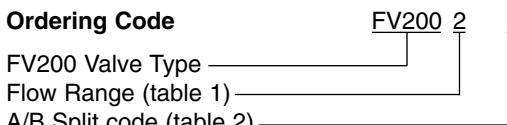


Table 1:

Code	Flow Range
30	2.5 - 8 gpm
50	5 - 13 gpm
70	10 - 20 gpm

Table 2:

Code	A/B Ratio %
1	25/75
2	50/50
3	40/60



VFD50 Series Variable Priority Flow Divider

- Total flow capacity: 13 gpm, Max Pressure: 3625 psi
- Priority flow: hand adjustable; 0 - 4 gpm or 0 - 8 gpm (pressure compensated)
- (**Flow Code**): 4 gpm (15), 8 gpm (30) Ports Available:
- (**Port Code**): #6 SAE (G), 3/8" NPT (A), 3/8" BSP (B), Manifold (M)
- Order valve by **flow code** and **port code**.
- Ordering Example: VFD50-15-A is a 4 gpm (15 lpm) max priority flow valve with 3/8" NPT ports

Valve Ordering Code

Model #

VFD50-(flow code)-(port code)



2FV2V Series Flow Divider with Manual Priority Control

- Total flow capacity: 30 gpm, Max Pressure: 3625 psi
- Priority flow: adjustable from 0.14 - 20 gpm (pressure compensated)
- (**Flow Code**): 3 gpm (030), 5 gpm (050), 8 gpm (080), 12.5 gpm (125), 20 gpm (200), 25 gpm (250), 30 gpm (300)
- (**Port Code**): #12 SAE (G), 3/4" NPT (A), 3/4" BSP (J), M22 x 1.5 (M), 1/2" BSP (H), 3/8" BSP (T)
- Order valve by model#, **flow code** and **port code**
- Ordering Example: 2FV2V-200-A is a 20 gpm max priority flow valve with 3/4" NPT ports and manual adjustment knob.
- Also available with Reverse Flow Check, Priority Relief and Anti-Cavitation Check.

Valve Ordering Code

Model: #2FV2V-(flow code)-(port code)

Flow Codes

030, 050, 080, 125

200, 250, 300

RV2FV2V Variable Priority Flow Divider

RV2FV2V Variable Priority Flow Divider with Relief Internally Drained

Specifications as above with relief from Priority to Bypass

Valve Ordering Code: Model No. RV2FV2V-(flow code)-(port code)



RVX2FV2V Variable Priority Flow Divider with Relief Externally Drained

Specifications as above with relief from Priority to External Drain

Valve Ordering Code: Model No. RVX2FV2V-(flow code)-(port code)

AC2FV2V Variable Priority Flow Divider with Anti Cavitation Check from Priority to Bypass

Valve Ordering Code: Model No.AC2FV2V-(flow code)-(port code)

CK2FV2V Variable Priority Flow Divider with Reverse Flow Check from Priority to Inlet

Valve Ordering Code: Model No. CK2FV2V-(flow code)-(port code)



FDM Series Flow Divider with Remote Priority Control

- Total flow capacity: 30 gpm, Max Pressure: 3625 psi. Also available with relief, anti-cavitation or reverse flow check.
- Power Requirements: 8 - 28 VDC @ 2.5 A max (avg 100 mA)
- Pressure Compensated Priority flows available: (see flow codes)
- (**Flow Code**): 3 gpm (030), 5 gpm (050), 8 gpm (080), 12.5 gpm (125), 20 gpm (200)
- Ports Available: (**Port Code**): #12 SAE (G), 3/4" NPT (A), 3/4" BSP (B), M22 x 1.5 (M)
- Remote control options: (**Controller Code**) Potentiometer (P), 4 - 20 mA (MA),
- Order valve by model#, **flow code**, **port code** and **controller code**.
- Ordering Ex: FDM-125-G-P is a 12.5 gpm priority flow valve with #12 SAE O-ring ports & potentiometer controller.

Valve Ordering Code

Model #	
FDM-030-(port code)	
FDM-050-(port code)	
FDM-080-(port code)	
FDM-125-(port code)	
FDM-200-(port code)	

Controller Ordering Code

(CODE)	
(P)	
(MA)	
(V)	
(CB)	

2FV2V Series Manifold Mounted Variable Priority Flow Divider

- Total flow capacity: 30 gpm, Max Pressure: 3625 psi
- Priority flow: adjustable from 0.14 - 20 gpm (pressure compensated)
- (**Flow Code**): 3 gpm (030), 5 gpm (050), 8 gpm (080), 12.5 gpm (125), 20 gpm (200), 25 gpm (250), 30 gpm (300)
- Order valve by model# & flow code
- Ordering Example: M2FV2V- 2 0 0 is a manifold mount 20 gpm max priority flow valve with manual adjustment knob.
- Also available with Electric Remote Control, Reverse Flow Check, Priority Relief and Anti-Cavitation Check.



Valve Ordering Code

Model #	
M2FV2V-(flow code)	

2FV2V Series Flow Divider with Electric Motor Drive

- Total flow capacity: 30 gpm, Max Pressure: 3625 psi
- Power Requirements: 12 VDC @ 1.0 A max (avg 100 mA)
- Priority flow: adjustable from 0.14 - 20 gpm (pressure compensated)
- (**Flow Code**): 3 gpm (030), 5 gpm (050), 8 gpm (080), 12.5 gpm (125), 20 gpm (200)
- (**Port Code**): #12 SAE (G), 3/4" NPT (A), 3/4" BSP (J), M22 x 1.5 (M), 1/2" BSP (H), 3/8" BSP (T)
- Order valve by model#, **flow code** and **port code**
- Ordering Example: 2FV2V-125-G-E is a 12.5 gpm max priority flow valve with #12 SAE O-ring ports and standard electric motor drive
- Also available with Electric Remote Control, Reverse Flow Check, Priority Relief and Anti-Cavitation Check.



Valve Ordering Code

Model #	
2FV2V-(flow code)-(port code)	

FVDVRV80 Variable Priority Flow Divider with Diverter Valve

- Total flow capacity: 21 gpm, Max Pressure: 3000 psi
- Manual diverter valve allows On/Off control of priority flow.
- Available with priority relief valve vented to bypass (do not pressurize bypass in this instance) Order Code (RV)
- Priority flow: adjustable from 0.14 - 20 gpm (pressure compensated)
- (Flow Code): 2.5 gpm (010), 5 gpm (020), 8 gpm (030), 13 gpm (050)
- (Port Code): A Inlet & bypass 1/2" NPT, Priority 3/8" NPT



Valve Ordering Code

FVDV (RV) (Flow Code) (Port Code)

FDC60 Fixed Flow Divider

Total flow capacity: 18 gpm, Max Pressure: 4500 psi. Single input flow can be split or recombined in ratios from 50/50 to 95/10. Pressure compensation maintains ratio independent of load. Steel components in cast iron body.

Ordering Code

Typical Code: FDC60 10 1 A50/B50
 FDC60 Valve Type _____
 Recommended input flow range (table 1) _____
 Porting (table 2) _____
 Divider Ratio (table 3) _____



FDC60 Valve Ordering Code

Model #
 FDC60-(flow code)-(port code)-(ratio)

Table 1:

Code	Flow Range
05	0.5 - 1.3 gpm
10	1.3 - 3.0 gpm
20	2.5 - 5 gpm
30	4 - 8 gpm
40	6 - 10 gpm
50	9 - 13 gpm
60	12 - 16 gpm
70	14 - 18 gpm

Table 3:

A	B
50%	50% thru'
90%	10%

Outlet port A or B may be designated to take either leg of the ratios.

Table 2:

Code	Port P	Port A/B
1	M18 x 1.5	M18 x 1.5
2	M22 x 1.5	M18 x 1.5
3	3/8" BSP	3/8" BSP
4	1/2" BSP	3/8" BSP
5	1/2" BSP	1/2" BSP
6	7/8" - 14 SAE	3/4" - 16 SAE
7	M27 x 2	M22 x 1.5
8	1/2" NPT	1/2" NPT

RV020 Direct In-line relief Valve

- Max flow capacity: 5 gpm,
- Max Pressure: 3000 psi
- Direct acting in-line relief valve with high tolerance to particle contamination.
- Quick response protects against shocks.
- Factory set to customer specified relief pressure from 300 to 3000 psi.
- Straight through porting allows valve to be 'T' connected to tank.
- Provides protection against thermal expansion of fluid.
- (Port Code): 3/8 NPT (A), 3/8" BSP (J)

Ordering Code

Typical Code: RV020 2500 A
 FV Valve Type _____
 Relief pressure (psi) _____
 Port code _____



Valve Ordering Code

Model #
 RV020-(port code)



SV50 Rotary Diverter Valve

- Provides fast and positive control of oil to and from cylinders & motors.
- Select from three or four port valve with spool allowing flow to be diverted from A -B or P to T
- 15 gpm, 3000 psi
- Steel spool in cast iron body
- Pattern Code: 3 Port P-A & P-B Code (6), 4 port Closed Center Code (8), 4 port Open Center Code (11)
- Porting Code: (A) 3/8" NPT, (J) 3/8" BSP

Valve Ordering Code:

SV50 - (Pattern Code) - (Port Code)



SV80 & DV80 Flow Diverter / Selector Valve

Total flow capacity: 20 gpm, Max Pressure: 3000 psi. Manually actuated diverter valve directs flow into either of two ports. Can be used as safety lock valve to prevent accidental operation of circuit. DV80 valves provide the same spool types as SV80 but DV80 valves have Roller Cam or Ball operation and a cover over the return spring which is opposite the actuation end of spool.

Valve Ordering Code

Model #

SV80-(spool code)-(ports)-(operation)

DV80-(spool code)-(ports)-(operation)



Table 1

Spool Code = Type
A
B

Table 2

Code	Porting
J	1/2" BSPF
G	7/8"-14 SAE
M**	M22 x 1.5
A**	1/2" NPT

Table 3

Code	Operation
S	Spring Offset
M	Manual, Push-Pull
T	Threaded, Push-Pull
R*	Roller
B*	Ball

* DV80 Only

** SV80 Only

180 Series Rotary Diverter Valve

Consists of a rotor which is rotated with respect to the valve body. When the rotor is placed in selected positions inlet and outlet ports are connected in various combinations permitting the start, stop or directional change of fluid under pressure. The functions specific to a valve depends primarily on rotor type selected.

Specifications

Maximum Working Pressure: 10150 psi

Spring center models will not spring return to center when operated over 3000 psi.

Maximum Flow: 10 gpm See ordering codes for available flow sizes.

Features

- Pressure loaded seats working against optically flat rotors automatically compensate for valve wear to assure near zero leakage even after more than 500,000 cycles.

- Select from numerous variations including 7 flow patterns, 3 flow ratings, many porting configurations, ball or offset ball operating handles, spring centring and detents.
- Valves may be in-line, panel or manifold mounted.
- High pressure cap available (max pressure 3600 psi) enables valve to be used in series without drain.



YB Series Pumps

Compact, light weight aluminium gear pumps available in six displacements from 0.15 to 0.73 in³/rev at pressures to 2000 psi continuous, 2500 psi intermittent duty.

**MYB Series Motors**

Compact, light weight aluminium gear motors available in four displacements from 0.29 to 1.73 in³/rev. Efficient performance at speeds to 5000 rpm & supply pressure to 2000 psi.

B Series Pumps

Basic - cast iron fixed clearance gear pumps available in nine displacements from 0.11 to 0.74 in³/rev at pressures to 3500 psi.

**MB Series Motors**

Basic - cast iron fixed clearance gear motors available in seven displacements from 0.15 to 0.59 in³/rev at supply pressure to 2500 psi.

YC Series Pumps

Compact, light weight aluminium gear pumps with pressure balanced design available in six displacements from 0.58 to 1.94 in³/rev at pressures to 2500 psi.

**MYC Series Motors**

Compact, light weight aluminium gear motors with pressure balanced design available in six displacements from 0.58 to 1.94 in³/rev and speeds to 5000 rpm.

K Series Pumps

Highly flexible multi-section, rugged, dependable gear pumps with pressure balanced wear plate available in nine displacements from 0.86 to 3.88in³/rev.

**MK Series Motors**

Highly flexible, rugged, dependable gear motors available in seven displacements from 1.29 to 3.88 in³/rev with 1300 lb-in torque at speeds to 2000 rpm with 2500 psi supply pressure.

A1C Check Valve Size 8

- Cavity: J8-2
- Flow rate: 10.5 gpm
- Pressure: 5000 psi
- Max Leakage Rate: 6 drops/min
- Body: Aluminum or Steel
- Spring Rate: None, 5 psi, 65 psi
- Seals: Nitrile or Viton

A1D Check Valve Size 10

- Cavity: J10-2
- Flow rate: 20.5 gpm
- Pressure: 5000 psi
- Max Leakage Rate: 6 drops/min
- Body: Aluminum or Steel
- Spring Rate: None, 5 psi, 65 psi
- Seals: Nitrile or Viton

B1D Low Pressure Direct Acting Relief Valve Size 10

- Cavity: J10-2
- Flow rate: 10.5 gpm
- Body: Aluminum or Steel
- Pressure: Aluminum max 3000 psi, Steel max 5000 psi
- Max Leakage Rate: 6 drops/min
- Relief Setting: 70 - 500 psi, 300-1200 psi
- Seals: Nitrile or Viton

B3D Direct Acting Relief Valve Size 10

- Cavity: J10-2
- Flow rate: 10.5 gpm
- Body: Aluminum or Steel
- Pressure: Aluminum body max 3000 psi, Steel body max 5000 psi
- Max Leakage Rate: 10 drops/min
- Cracking Pressure: 0 - 1100 psi, 900 - 3000 psi, 2100 - 5000 psi
- Adjustment: Internal, External, Knob
- Seals: Nitrile or Viton

B2D Differential Area Relief Valve Size 10

- Cavity: J10-2
- Flow rate: 10.5 gpm
- Body: Aluminum or Steel
- Pressure: Aluminum body max 3000 psi, Steel body max 5000 psi
- Max Leakage Rate: 6 drops/min
- Cracking Pressure: 0-1100 psi, 900 - 3000 psi, 2100 - 5000 psi
- Adjustment: Internal, External, Knob
- Seals: Nitrile or Viton

E1C Needle Valve Size 8

- Cavity: J10-2
- Flow Rate: 13 gpm
- Pressure: Aluminum body 3000 psi, Steel body 5000 psi
- Leakage Rate: 6 drops/min max
- Adjustment: Knob or Locking Knob

E1D Needle Valve Size 10

- Cavity: J10-2
- Flow Rate: 13 gpm
- Pressure: Aluminum body 3000 psi, Steel body 5000 psi
- Leakage Rate: 6 drops/min max
- Adjustment: Knob or Locking Knob

L1D Rotary Valve Size 10

- Cavity: J10-2
- Flow Rate: 21 gpm
- Pressure: Aluminum body 3000 psi, Steel body 5000 psi
- Leakage Rate: 80 ml/min max
- Adjustment: Detented Knob, Knob, Lever, Stem or Spring Assisted Lever

**CM1286 Line Body Size 8**

- Cavity: J8-2
- Material: Aluminum or Steel
- Ports: SAE or BSP
- Mounting: 2 x Through hole or slot

**CM1215 Line Body Size 10**

- Cavity: J10-2
- Material: Aluminum or Steel
- Ports: SAE or BSP
- Mounting: 2 x Through hole or slot

1/2" Line Mount Lever Operated Directional Valves Model BG4D

- Nominal Flow Rate: 15 gpm
- Max pressure: 5000 psi
- Max T port pressure: 5000 psi
- Lever: 22.5°, Eye-end, 90°, Straight, Cam or Air/Oil pilot also available.
- Control: 2 or 3 position detent or spring centered, 5 spool types
- Mounting: Unrestricted



3 Port Diverter Valve Model BG3D

- Flow Rate: 17 gpm
- Pressure: 3000 psi
- Actuation: Stem, Knob, Cam with or without spring offset
- Directional Function: Spool released P-A, spool actuated P-B
- Force required to actuate spool: 8.2 kg - 31.8 kg.

**R Series 3/8" Lever Operated**

- Low profile valve designed for applications not requiring integral checks, service port reliefs or anti-cavitation checks.
- Maximum pressure: 3500 psi
- Maximum Power Beyond Pressure: 3500 psi
- Maximum Tank Line Pressure: 950 psi
- Nominal Flow Rate: 9 gpm
- Ports: SAE O-ring

Options available:

6 alternative spool types, inlet pressure relief, spring center or detent control, Power Beyond, Closed Center Outlet, Flexible Cable Control.

**S Series 1/2" Lever Operated**

Designed primarily for agricultural, mobile and mining applications. Circuitry is parallel through the assembly but available at each work section when levers are actuated. Features low service port leakage and good spool metering characteristics. Each work section has load hold check to prevent interaction between simultaneously used sections.

- Maximum pressure: 3500 psi
- Maximum Power Beyond Pressure: 3500 psi
- Maximum Tank Line Pressure: 950 psi
- Nominal Flow Rate: 17 gpm
- Ports: SAE O-ring

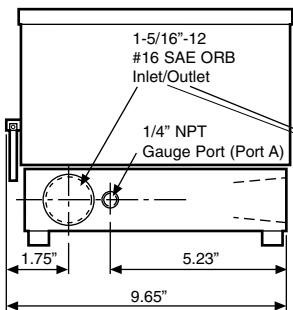
Options available:

6 spool types, inlet pressure relief, spring center or detent control, twin spool control, power beyond, closed center outlet, flexible cable control.

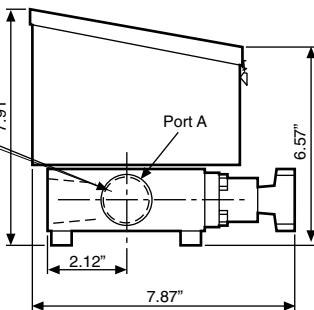


Dimensions: Portable Testers

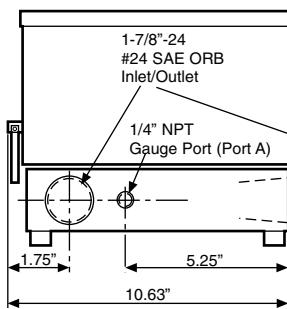
All Drawings Not to Scale



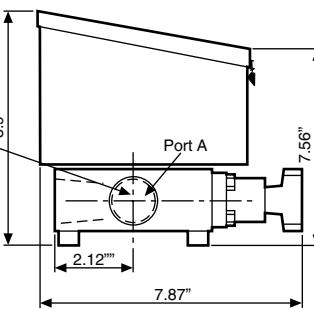
Models DHT/HT252 & DHT/HT402
(Port A is preferred inlet)



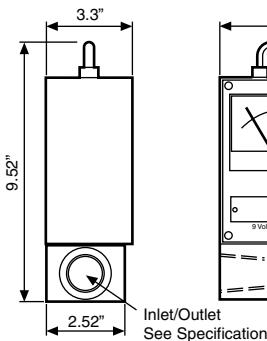
Models DHT/HT752 & DHT/HT762
(Port A is preferred inlet)



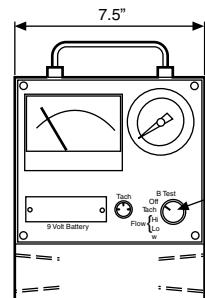
DHT502-HP
Port A is preferred inlet



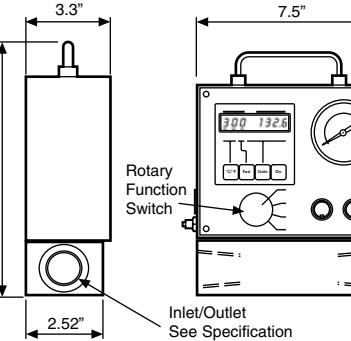
DHCR Series Readout
(Flow block not shown)



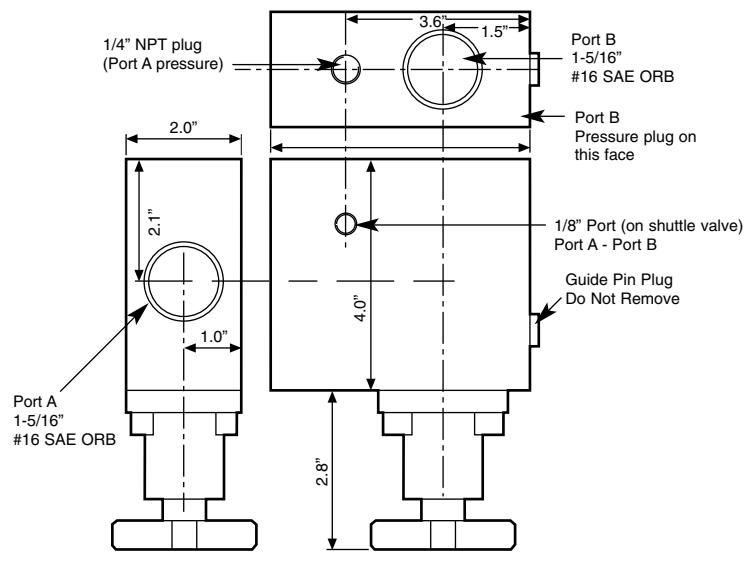
HC Series Readout



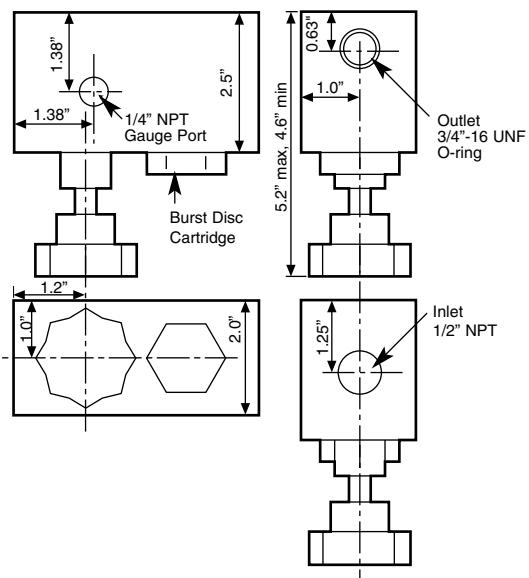
DHC Series Readout



HCR Series Readout
(Flow block not shown)



HV400 Loading Valve

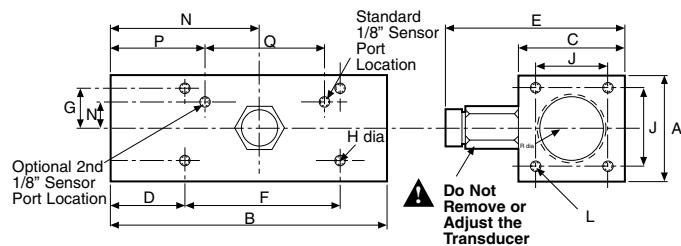


HV100 Loading Valve

Dimensions

Dimensions: Flowmeters

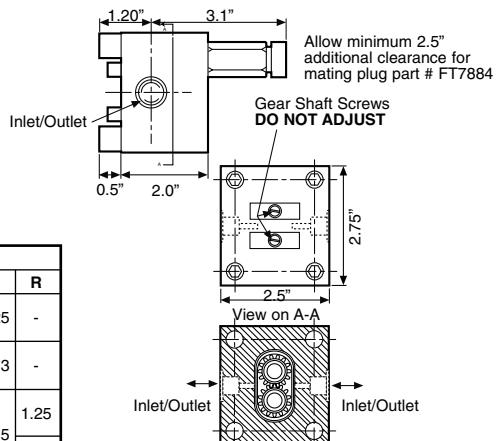
All Drawings Not to Scale



LT Series Turbine Flowmeters

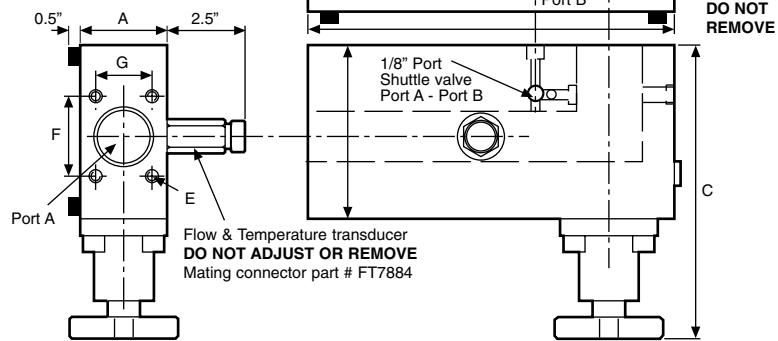
Model Number	Port Size	Dimensions (inches)															
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
LT50	1-1/16" #12 SAE ORB	2.5	7.5	2	2	4	4.125	1.75	0.25	-	-	-	4	0.375	1.25	4.125	-
LT125																	
LT250	1-5/16" #16 SAE ORB	2.5	7.5	2	2	4	4.125	1.75	0.25	-	-	-	4	0.375	1.313	4.063	-
LT400																	
LT500	1-1/2" SAE 4 Bolt Flange	4	8.375	3	2	5	4.375	2.75	0.375	1.406	2.75	1/2"	5	0.625	1.25	5.625	1.25
LT750	1-1/2" SAE 4 Bolt Flange																1.50
LT760																	

LT Series Positive Displacement Flowmeters

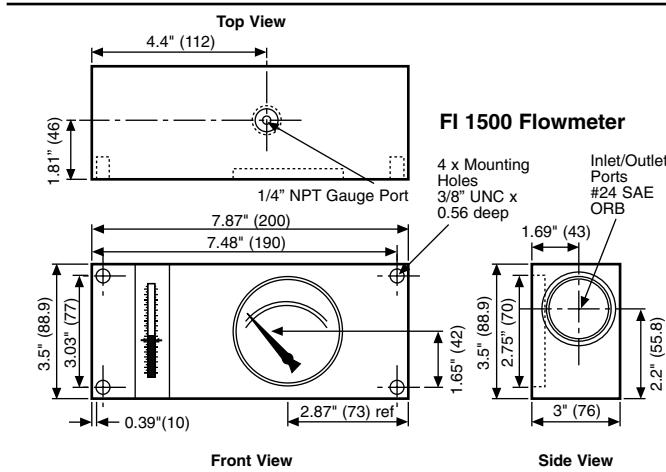
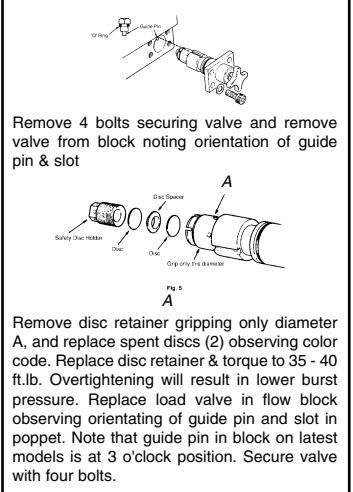


LXXX-R Series Turbine Flowmeters with Built-In Loading Valve

Model Number	Dimensions - inches						
	A	B	C	D	E	F	G
LT300R/LT400R	2	3.875	6.75	8.75	N/A	N/A	N/A
LT500R-HP	3	5	8.5	9.25	N/A	N/A	N/A
LT750R/LT760R	3	5	7.25	10	12" UNC	N/A	N/A

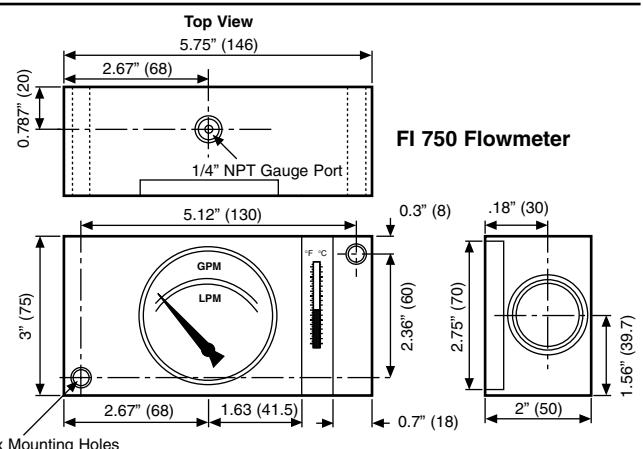


LXXX-R Burst Disc Replacement



FI 1500 Flowmeter

4 x Mounting Holes
3/8" UNC x 0.56 deep
Inlet/Outlet Ports #24 SAE ORB

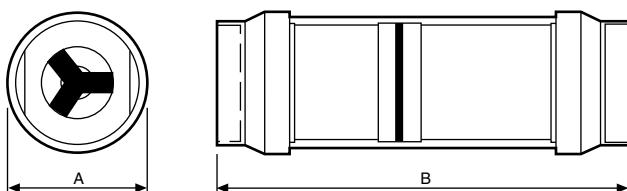


FI 750 Flowmeter

2 x Mounting Holes
0.343" dia.

WP Meters Size Code

Dim	Series 3	Series 4	Series 5	Series 5
A	1.87" (48 mm)	2.37" (60 mm)	3.5" (90 mm)	3.5" (90 mm)
B	6.56" (167 mm)	7.16" (182 mm)	12.62" (322 mm)	10.18" (258 mm)
Port Sizes	1/4", 3/8", 1/2" NPTF #6, #8, #10 SAE ORB 1/4", 3/8", 1/2" BSPP	3/4", 1" NPTF #12, #16 SAE ORB 3/4", 1" BSPP	2" NPTF #32 SAE ORB 2" BSPP	1-1/4", 1-1/2" NPTF #20 SAE ORB 1-1/4" BSPP



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Manufacturers of Mobile, Industrial and Agricultural Hydraulic Equipment

January						February					March					Wk			
Wk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15				
Mon	3	10	17	24	31		7	14	21	28		7	14	21	28	Mon			
Tue	4	11	18	25		1	8	15	22		1	8	15	22	29	Tue			
Wed	5	12	19	26		2	9	16	23		2	9	16	23	30	Wed			
Thu	6	13	20	27		3	10	17	24		3	10	17	24	31	Thu			
Fri	7	14	21	28		4	11	18	25		4	11	18	25		Fri			
Sat	1	8	15	22	29	5	12	19	26		5	12	19	26		Sat			
Sun	2	9	16	23	30	6	13	20	27		6	13	20	27		Sun			
April						May					June								
Wk	14	15	16	17	18		18	19	20	21	22	23		23	24	25	26	27	Wk
Mon	4	11	18	25			2	9	16	23	30			6	13	20	27		Mon
Tue	5	12	19	26			3	10	17	24	31			7	14	21	28		Tue
Wed	6	13	20	27			4	11	18	25				1	8	15	22	29	Wed
Thu	7	14	21	28			5	12	19	26				2	9	16	23	30	Th
Fri	1	8	15	22	29		6	13	20	27				3	10	17	24		Fri
Sat	2	9	16	23	30		7	14	21	28				4	11	18	25		Sat
Sun	3	10	17	24			1	8	15	22	29			5	12	19	26		Sun
July						August					September								
Wk	27	28	29	30	31		32	33	34	35	36		36	37	38	39	40	Wk	
Mon	4	11	18	25			1	8	15	22	29			5	12	19	26		Mon
Tue	5	12	19	26			2	9	16	23	30			6	13	20	27		Tue
Wed	6	13	20	27			3	10	17	24	31			7	14	21	28		Wed
Thu	7	14	21	28			4	11	18	25				1	8	15	22	29	Thu
Fri	1	8	15	22	29		5	12	19	26				2	9	16	23	30	Fri
Sat	2	9	16	23	30		6	13	20	27				3	10	17	24		Sat
Sun	3	10	17	24	31		7	14	21	28				4	11	18	25		Sun
October						November					December								
Wk	40	41	42	43	44	45		45	46	47	48	49		49	50	51	52	53	Wk
Mon	3	10	17	24	1			7	14	21	28			5	12	19	26		Mon
Tue	4	11	18	25			1	8	15	22	29			6	13	20	27		Tue
Wed	5	12	19	26			2	9	16	23	30			7	14	21	28		Wed
Thu	6	13	20	27			3	10	17	24				1	8	15	22	29	Thu
Fri	7	14	21	28			4	11	18	25				2	9	16	23	30	Fri
Sat	1	8	15	22	29		5	12	19	26				3	10	17	24	31	Sat
Sun	2	9	16	23	30		6	13	20	27				4	11	18	25		Sun

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